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Exploitation and movements of Atlantic cod (*Gadus morhua*) in NAFO Division 3KL: tagging results from the reopened fishery in 2006

Exploitation et mouvements de la morue atlantique (*Gadus morhua*) dans la division 3KL de l'OPANO : résultats de marquage suite à la réouverture de la pêche en 2006

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ABSTRACT

The directed fishery for cod in the inshore of NAFO Div. 2J+3KL was reopened during 2006, resulting in reported landings totaling 2,679 t from commercial, recreational, sentinel and by-catch fisheries combined (2,373 t from 3KL). Approximately 5,000 cod were tagged and released in the inshore of 3KL during 2006 prior to the re-opening of the fishery. Tag returns were used to estimate exploitation rates in three inshore areas that accounted for most of the landings (3Ki, 3La, 3Lb). The tagging study incorporated estimates of tagging mortality, tag loss, and reporting rates using methods we have described previously. Single tag reporting rates estimated from a high-reward tagging study were approximately 50%, much lower than the rate (76%) estimated for the period 1997-2002. Based on recaptures of tagged cod >50 cm fork length and released in 2006, exploitation rates (% harvested) were high (25-35%) for cod released in 3Ki in the Twillingate area compared to those tagged about 50 km away southeast of Fogo (10%); reported landings from 3Ki during 2006 were only 573 t. Cod tagged further south in 3La (Bonavista Bay) and 3Lb (Trinity Bay) were much larger (mostly >65 cm) and exploitation estimates were 5% for cod tagged in Bonavista Bay and 10% for those tagged in Smith Sound, Trinity Bay. The distribution of recaptures was similar to that from our previous (1997-2002) experiments. Overall, the results are consistent with our previous conclusion indicating a resident inshore component of northern cod that remains within an area bounded by the 3Kd/3Ki border in the north and the 3Lb/3Lf border to the south.

RÉSUMÉ

La pêche dirigée de la morue dans les divisions 2J+3KL de l'OPANO a été rouverte en 2006, donnant lieu à des débarquements déclarés totalisant 2 679 t provenant des pêches commerciales, sportives et sentinelles, de même que des captures accessoires (dont 2 373 t de 3KL). Environ 5 000 morues ont été marquées et remises à l'eau par les pêcheurs côtiers de 3KL en 2006 avant la réouverture de la pêche. Les étiquettes retournées ont servi à estimer le taux d'exploitation dans les trois zones côtières d'où proviennent la plupart des débarquements (3Ki, 3La, 3Lb). L'étude de marquage inclut des estimations de la mortalité due au marquage, de la perte d'étiquettes et du taux de déclaration au moyen de méthodes décrites antérieurement. Le taux de signalement d'étiquettes simples, déterminé au moyen d'une étude de marquage à récompense importante, était d'environ 50 %, soit bien inférieur au taux estimé (76 %) pour la période de 1997 à 2002. En s'appuyant sur les recaptures de morue marquées de >50 cm de longueur à la fourche remises à l'eau en 2006, le taux d'exploitation (% capturé) était élevé (25 à 35 %) pour les morues remises à l'eau dans 3Ki, dans la région de Twillingate, comparativement aux morues marquées à environ 50 km, au sud-est de Fogo (10 %); les débarquements déclarés de 3Ki en 2006 n'étaient que de 573 t. Les morues marquées plus au sud dans 3La (baie Bonavista) et 3Lb (baie de la Trinité) étaient beaucoup plus grosses (<65 cm pour la plupart) et l'exploitation a été estimée à 5 % pour les morues marquées dans la baie Bonavista et à 10 % pour celles qui ont été marquées dans le détroit de Smith, baie de la Trinité. La répartition des recaptures était semblable à celle de nos expériences antérieures (1997 à 2002). Dans l'ensemble, les résultats sont conformes à nos conclusions antérieures indiquant une composante côtière résidente de morue du Nord qui est dans une zone bornée par la limite de 3Kd/3Ki au nord et la limite de 3Lb/3Lf au sud.

INTRODUCTION

This document updates the results from an ongoing mark-recapture study of Atlantic cod (*Gadus morhua*) initiated during 1997 in NAFO Div. 2J+3KL and Subdiv. 3Ps. The study was scaled back in 2J+3KL during 2003-05 when the directed cod fishery in this region was closed and landings (particularly during 2004 and 2005) were restricted mainly to by-catch of cod taken during a black-back flounder (*Pseudopleuronectes americanus*) fishery. Reported landings of cod (and hence tag returns) were reduced substantially in 2003-05 compared to the 1998-2002 period.

The directed cod fishery in the inshore of 2J+3KL was reopened in 2006 and tagging resumed prior to the fishery opening, with approximately 5000 tagged cod released during April-early July 2006. The purpose of the mark-recapture study is to provide information on movement patterns and stock structure of inshore cod and obtain estimates of exploitation rates on cod tagged in different inshore regions. In this document we focus on results obtained from tagging conducted in 2006. Previous findings from inshore tagging studies are reported in Brattey (1999, 2000), Brattey et al. (1999), Brattey and Healey (2003, 2004, 2005, 2006), Brattey and Cadigan (2004), Cadigan and Brattey (1999a, b; 2000a, b; 2003a, b, 2006), Lawson and Rose (2000), and Lilly et al. (2001). Historical cod tagging studies (prior to 1994) in the Newfoundland Region are summarized in Taggart (1997), Taggart et al. (1995), and Myers et al. (1996, 1997).

MATERIALS AND METHODS

Cod for tagging were captured with various gears (mostly hand-line), measured (nearest cm) and tagged with one or two t-bar anchor tags inserted at the base of the first dorsal fin, and released.

Experienced technicians conducted the tagging. Only cod ≥45 cm fork length (FL) were tagged and each batch of cod typically consisted of individuals tagged with single or double tags. The tags were uniquely numbered and bore a return address as well as the value of the reward ($10 for one single, $20 for two singles, or $100 for high-reward). Typically 10-20% of the cod received high-reward tags. The tagging program was advertised extensively among those participating in the fishery.

Reported landings of cod from 3KL during the period 1998-2006 were extracted from the Statistics Branch catch database and are summarized to aid in the interpretation of tag returns. Landings for the adjacent management units (3Ps and 3Pn +4RS) are also given. Landings for these adjacent stocks for 2006 are preliminary.

ESTIMATION OF EXPLOITATION RATES

The methods used to estimate annual exploitation rates are described in Brattey and Healey (2003). Tag loss and reporting rate estimates for each year and region were calculated from double tagging and high-reward tags using methods described in Cadigan and Brattey (2006). Reporting rates for each region and year are updated; estimates of tag loss showed only minor changes and were not recalculated. An assumed rate of natural mortality (m) of 0.4 per yr was used in the present analysis, consistent with the value used in recent assessments of inshore cod in 3KL (Lilly et al. 2005, 2006; DFO 2005, 2006); note that this value is higher than

the value (m=0.2 per yr) used in previous estimates of exploitation rate for inshore cod in 3KL (Brattey and Healey 2004, 2005).

Many of the cod released in previous years (i.e. those tagged in 2002 and earlier) now have long (>4 yrs) times at liberty and some of the these earlier experiments likely have relatively few tagged cod still available for recapture, due to the combined effects of fishing, natural mortality, and tag loss. The remaining tagged cod from these experiments would also be typically >8 years old, given that they are usually a minimum of 4 yrs old at the time of tagging; thus any estimates of exploitation from these experiments would apply only to the 8+ portion of the population. In this study we have not used the data from experiments where cod were >4 yrs at liberty to estimate exploitation (harvest) rates as the numbers available for recapture are small and most of the cod would be beyond the optimum selectivity of 5.5" mesh gillnets which account for most of the catch. For each region of tagging (3Ki, 3La 3Lb) we also computed an average annual exploitation rate using estimates for individual experiments from the year of tagging and three previous years; these were weighted by the number of tagged cod released.

RESULTS AND DISCUSSION

RELEASE OF TAGGED COD

Details of the cod tagging experiments conducted in 3KL since 1997 are summarized in Table 1. Locations are shown in Fig. 1 and 2. The number of cod tagged each year has ranged from a low of only 118 in 1998 to a high of 8,420 in 1999. During 2003-05 cod were tagged and released only in Smith Sound. The sizes of tagged cod typically ranged from 45 cm to about 115 cm, with mean lengths mostly in the 55-65 cm range.

During 2006, tagged cod were released in three areas, in 3Ki (n=2,711), 3La (n=1,345) and 3Lb (n=880). A further 1,800 cod were tagged and released in 3Lb during November-December 2006 after the fishery was completed (Table 1); these experiments are not considered further here. There were considerable differences in the length frequency of tagged cod among regions (Fig. 3). Most of the tagged cod in 3Ki were small (mean fork length, FL=55 cm). In contrast, there were few tagged cod <60 cm in either 3La (mean FL=75 cm) or 3Lb (mean FL=80 cm).

RECAPTURES OF TAGGED COD

For each experiment, annual summaries of the numbers of tagged cod released and reported as recaptured up to the end of 2006 are given in Table 2. In total, >100 tagging experiments have been conducted since 1997, comprising over 33,000 tagged cod released at various locations from 3Ki (Notre Dame Bay) in the north to 3Lq (St. Mary's Bay) in the south. Most tagging has been conducted in 3La (Bonavista Bay) and 3Lb (Trinity Bay) and coverage has tended to vary among years. Mean lengths of tagged cod have typically been in the range 50-65 cm, but average size has often been larger (>70 cm) for cod tagged in Smith Sound and vicinity.

The total numbers of tagged cod released and reported as recaptured each year is shown below. Several thousand cod were tagged during 1997, 1999-2002 and 2006. Recoveries are strongly influenced by the amount of effort (landings), and recaptures were clearly highest during 1999-2002, but low during 2004-05 when cod landings were limited and relatively few cod were tagged in those years. During 2003, a total of 472 cod were tagged;

these were captured and released during a fish kill in Smith Sound in April and may have been subject to much higher mortality after release; consequently, the data from this experiment has not been used in subsequent analyses.

Release Year	Nos. tagged	Number of reported recaptures (all areas)									
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1997	3,451	35	136	190	85	38	27	13	1	1	1
1998	118		14	9	2	0	0	0	0	0	0
1999	8,268			840	378	243	125	69	14	4	3
2000	3,511				227	165	68	33	4	1	5
2001	5,963					582	406	142	24	8	24
2002	5,093						409	277	43	16	17
2003	472							1	0	2	3
2004	923								0	24	19
2005	1026									16	23
2006	4936										228
Totals	33,759	35	150	1039	692	1028	1035	535	86	72	323

Of the 323 tags reported as recaptured in 2006 most (71%) were from cod tagged and released in 2006. From the total returned in 2006, 62 (19.2%) were returned by recreational fishers and the remainder (80.8%) by commercial fishers and plant workers.

SPATIAL AND TEMPORAL DISTRIBUTION OF COD LANDINGS

Reported landings of cod from the inshore of 3KL and neighbouring stock areas are summarized by statistical unit area for the period 1998-2006 (Tables 3A-3C). In 2J+3KL the total allowable catches (TAC's) from 1998 to 2002 ranged from 4,000 t to 9,000 t, respectively. The directed fishery was closed during 2003-2005 and reported annual landings were $\leq$1,200 t. In 2003, most landings (82%) came from 3Lb during April, when dead and dying cod appeared in Smith Sound and were harvested (see Lilly et al. 2004; Colbourne et al. 2003); the remaining landings in 2003 were mostly from the sentinel fishery. In 2004 and 2005, cod were caught mostly during the black-back flounder fishery in July and August. Reported landings from the inshore of 3KL during 2006 (2,376 t) were substantially lower than those for the period 1998-2002 (>4,100 t, Table 3).

The distribution of landings from the inshore of 3KL shows distinct changes over time (Fig. 4). During 1998-2002 there was a rapid decline in the proportion of landings coming from all unit areas in 3K and a corresponding increase in 3Lb (Trinity Bay). The large spike in landings in 3Lb in 2003 represents the fish kill in Smith Sound. Landings are consistently low further northward towards Notre Dame Bay (3Kh) and the White Bay-Northern Peninsula area (3Kd, 3Ka). Landings from southern 3L (i.e. Conception Bay southward, areas 3Lf, 3Lj, and 3Lq) tend to be much lower and more consistent over time in terms of a percentage of the total. The distribution of landings in 2006 has reverted to the pattern seen in the fishery in 1998-99, with about 36% of the catch taken in 3Kh/i, and 17% and 20% taken in Bonavista Bay and Trinity Bay, respectively. Reported annual landings from inshore 2J and from offshore 2J+3KL (not shown) have been small (<80 t) throughout 1998-2006.

In the 2006 fishery, there was considerable geographic variability in the number of active fishers along the inshore of 2J+3KL (Table 4). There was a concentration of fishers in eastern Notre Dame Bay where >500 active licenses resulted in total landings of approximately 600 t. The number of active licenses ranged from 200 to 400 in Bonavista Bay and Trinity Bay resulting in 140–360 t of landings. Activity and landings were much lower from central Notre Dame Bay northward to Labrador, and in the extreme south in St. Mary's Bay (<100 active fishers and <90 t landings).

The reported landings from NAFO Subdiv. 3Ps in the post-moratorium period have been substantially higher than those in 3KL, ranging from 9,700 t in 1997 to 25,000 t in 1999 (Table 3B). The spatial patterns in landings has been broadly similar each year with highest landings (30-50% of the entire TAC) coming from Placentia Bay (3Psc), followed by the offshore region 3Psh. These substantial landings have resulted in returns of small numbers of tags from cod released in the inshore of 3KL (see below).

Reported landings from the northern Gulf stock area, which includes the west coast of insular Newfoundland, are shown in Table 3C. The directed cod fishery in this area was open during 1997-2002 with TAC's ranging from 3,000 to 7,500 t, closed in 2003, and reopened in 2004 with a TAC of 3,500 t. Reported landings while the fishery was open have ranged from just over 3,000 t in 1998 to almost 7,000 t in 2001. The low landings in 2003 (276 t) came mostly from sentinel and by-catch fisheries. These landings have not resulted in the return of any tags from cod released in the inshore of 3KL.

TAG REPORTING RATES

Estimates of the proportion of single and double tags returned by region and year are given in Table 5. There were substantial numbers of high-reward tags returned from regions 3K_IN (n=47) and 3L_INN (n=31) to estimate the reporting rate during 2006. The most notable finding was a substantial drop in reporting rates during 2006 for these regions. This result has a considerable influence on the estimates of exploitation rate given below. Only about 50% of the single tags from these regions were returned during 2006, compared to about 76% when the fishery was opened during 1998-2002.

TAGGING MORTALITY AND TAG LOSS RATES

Brattey and Cadigan (2004) showed that the proportion of tagged cod that die immediately after release due to the stress of capture and handling is higher during seasons when surface temperatures are warmer. We used tagging mortality values of 0.03 for cod tagged during November-June and 0.22 for those tagged during July-October as described in Brattey and Cadigan (2004). Tag loss rates were not recalculated for the present analyses as only a few double tagged cod have been recaptured in recent years. However, in our previous analyses (Cadigan and Brattey 2003b, 2006) we showed that Kirkwood's (1981) model was appropriate for modeling tag loss and we incorporated tag loss rate parameters (β_0 =0.07386 and β_1=0.04433) into our estimation of exploitation rate as described in Brattey and Healey (2003). Cod lose about 24% of the tags in the anterior position during the first year and thereafter losses diminish to about 1-2% per year up to 6 years at liberty. The loss rate for posterior tags is about 12% in the first year but similar to that of anterior tags in subsequent years.

EXPLOITATION RATES

Annual estimates of exploitation rate for each group of tagged cod (only for experiments where >50 cod were tagged) are summarized and grouped by area of release in Table 6. We emphasize that growth and length selectivity are not formally taken into account in this analyses (see below); thus, the estimates depend on the size range of cod that are available for tagging and the selectivity of the fishery. The minimum size of cod that are tagged was 45 cm FL (approximately aged 4) and estimates for the year of tagging are therefore usually for 4+ cod and for progressively older fish in subsequent years. However, in two of the areas where tagging was conducted in 2006 (3La and 3Lb) there were few tagged cod <65 cm fork length and these would represent 6+ cod. To investigate the size selectivity of the fishery we computed the percentage of tagged cod recaptured by length class, with cod grouped into 5 cm length classes, for cod tagged and released in three areas in 2006 (Fig. 5). We did not include cod tagged during previous years to avoid complications due to growth of cod after release. The fishery in 3La and 3Lb caught a wide range of sizes of cod with no strong trends across size groups within the range 60-85 cm. In 3Ki, large numbers of cod <55 cm were tagged, but these were rarely recaptured compared to larger cod; those in the 60-80 cm length groups were most strongly selected by the fishery but a higher percentage were recaptured compared to cod tagged in 3La/b. Few cod >80 cm were available for tagging in 3Ki. Gillnets are the dominant gear in the 2006 fishery in most areas and the results suggest that this gear does not catch many cod <55 cm FL or >85 cm FL (approximately), but there are no strong selectivity trends within this size range. In light of these findings, we used data only from cod >50 cm and <85 cm at the time of release when computing annual exploitation rates.

The numbers of tagged cod available for recapture within an experiment declines over time; consequently, for many of our experiments with long times at liberty (>4yrs) there may be only a small number of tagged fish available for recapture. Chance recapture of even a single tagged fish can result in high estimates of exploitation rate for some of the older tagging experiments. We do not feel that the results from individual experiments for tagged cod that are >4 yrs at liberty are informative as they are essentially based on very small sample sizes. Consequently, for each experiment we have not provided estimates of exploitation for more than 4 years after the year of release.

The estimates of exploitation for previous experiments (2005 and earlier) are generally higher than those reported in Brattey and Healey (2005). In the present analyses we used a higher assumed value for m (0.4 per yr) based on findings from recent assessments (Lilly et al. 2005, 2006) and only included cod >50 cm at the time of tagging, whereas the previous analysis used values of m=0.2 per yr and 45 cm, respectively. The higher rate of natural mortality reduces the number of tagged cod available for recapture, particularly among experiments with longer times at liberty, resulting in higher estimates of exploitation. Similarly, inclusion of large numbers of tagged cod that are too small to be caught in the fishery in the year of release would result in a negative bias in the estimate of exploitation. We excluded small cod (45-50 cm) tagged in 3Ki during 2006 to eliminate this potential bias.

Cod tagged in 3Ki around Twillingate during 2006 were heavily exploited (24.9-34.6%, Table 6). This result is noteworthy because most of the recaptures came from within eastern and central 3Ki and total landings from this area were approximately 660 t. This area is notable for the relatively large numbers of fishers and relatively high effort in the 2006 fishery (Table 4). In contrast, cod tagged elsewhere in 3Ki south east of Fogo were less heavily exploited during 2006 (10.4%) suggesting exploitation rates differed over small spatial scales. The generally high exploitation rates estimated for 3Ki during 2006 are consistent with previous findings from tagging studies during 1998 and 1999 when cod in this area were more heavily exploited than

those tagged elsewhere (Table 6).

Cod tagged off Cape Bonavista (3La, Fig. 1 and 2) were generally much larger (>65 cm, Fig. 3) than those in 3Ki and the estimated rate of exploitation for 2006 was much lower (5.4%, Table 6). Also, the amount of effort and landings in 3La were lower than in 3Ki. Exploitation rates for cod tagged in 3Lb during 2006 have increased compared to those estimated for 2004 and 2005, but remain lower than those estimated for the 1998-2002 period when the fishery was open and landings were higher.

Cod tagged in Smith Sound (3Lb, Fig. 1 and 2) were generally of large size, particularly in 2006 (>65 cm; Table 1 and Fig. 3). There were several estimates of exploitation for 2006 from cod tagged in Smith Sound, as several tagging experiments were conducted in this area during 2004-06 (Table 6); the average of these estimates was 10% (range 4.1-15.4%) approximately double the estimates for 2004 and 2005. Most of the cod tagged in Smith Sound leave this area in spring and are not exploited within Smith Sound itself; they typically disperse into Trinity and Bonavista Bay during late spring and summer and return to over-winter in Smith Sound. Acoustic studies have been used to provide estimates of over-wintering biomass within Smith Sound and the estimates ranged from a few thousand to >20,000 t during 1995-2002 (Rose 2003).

No tagging has been conducted in Conception Bay (3Lf), eastern Avalon (3Lf) or St. Mary's Bay (3Lq) for at least four years and no estimates of exploitation are available for 2006. These areas accounted for about 20% of the total landings in 2006. Similarly, for several years no tagging has been conducted north of Notre Dame Bay (3Ka, 3Kd) where landings were low (100 t or 4.3% of the 2006 total).

SPATIAL AND TEMPORAL DISTRIBUTION OF RECAPTURES

Updated summaries of the distribution of recaptures, grouped by year and NAFO unit area where cod were released, are given in Table 7. Locations where tagged cod were recaptured from some of the experiments conducted in 2006 are also shown (Fig. 6-10). These summaries provide information on cod movement patterns and show where the exploitation of cod tagged in each unit area has taken place each year. The plots depict only tag returns where the exact location of recapture (latitude/longitude) was provided, whereas in Table 7 all recaptures are reported and these are adjusted by regional/annual reporting rates.

Among cod tagged during 2006 in 3Ki (Fig. 6-8), 3La (Fig. 9), and 3Lb (Fig. 10) most recaptures come from within the area of tagging; however, there was also some movement between 3Ki, 3La, and 3Lb even during the year that cod are released. Most of the cod tagged in Trinity Bay (3Lb) were tagged in Smith Sound, and these tended to be recaptured northward in northwestern Trinity Bay, on both sides of the Bonavista Peninsula, and into Bonavista Bay (i.e. 3La) and in small numbers in 3K.

Stacked bar charts summarize the distribution of recaptures from tagging in each of the unit areas 3Ki (Fig. 11-12), 3La (Fig. 13-14) and 3Lb (Fig. 15-16). These plots in conjunction with the data in Table 7 show that, even after several years at liberty, most cod tagged in these three unit areas tend to remain within the region that extends from the 3Kd/3Kh border in the north to the 3Lb/3Lf border in the south, at least during the times of year when the fishery is open. There were relatively few recaptures from areas south of the 3Lb-3Lf border. Recaptures of cod tagged in southern 3L (3Lf, 3Lj, and 3Lq, see Table 7) indicate substantial movements into 3Psc and some movement to 3Psh, but little northward movement into 3La/b or the inshore

of 3K. This overall pattern of movements among cod tagged inshore in 3KL has persisted for about nine years (1997-2006).

Some cod tagged in 3Psc have been recaptured in 3L and more rarely in 3K, but most of the recoveries from outside the 3Ps stock boundary have come from unit areas in southern 3L, notably 3Lq/j/f (Fig. 17, Table 7). The percentages recaptured in southern 3L are generally small but these recaptures are observed in many experiments spanning several years (Table 7). Many of the more northerly recoveries were obtained during 1999 when the TAC in the inshore of 3KL was at a post-moratorium peak (8,400 t, Table 3B). Similarly, some cod tagged offshore in 3Ps (i.e. 3Psh, Fig. 18 and Table 7) have been recaptured in southern 3L although the percentages have generally been small (<1%). Recaptures from tagging further westward in 3Ps are not shown here as these have resulted in few or no recoveries from 3KL (see Brattey and Healey 2004, 2006).

Some of the tag returns depicted in Fig. 11-18 as well as the data in Table 7 indicate that one or two tagged cod are sometimes recaptured considerable distances away from the tagging area, such as from 3K to 3Psc or vice versa; however, these occurrences are extremely rare and represent a small fraction of the total releases and total recaptures. In general, dispersal of tagged cod away from release sites does not appear to increase with successive years at liberty; typically the tagged cod disperse the year they are tagged and show similar distributions of recaptures in successive years.

The extent to which cod tagged in the inshore migrate to offshore areas and vice-versa remains difficult to determine. The tagging data suggest that many of the cod inhabiting the coastal waters, particularly the larger fish (>60 cm), are inshore residents. Reported annual landings of cod from the offshore of 2J+3KL have been low (<50 t per annum) since the mid-1990s and DFO offshore trawl surveys continue to find few large fish (>60 cm) and indicate very low stock size in the offshore since the early 1990's (Lilly et al. 2005, 2006). However, our results do not preclude the possibility that some cod are migrating into the inshore from offshore, particularly the smaller ones observed in 3K (see Fig. 3). These small cod are clearly not over-wintering in Smith Sound and typically do not appear in the inshore of 3Ki until June. The timing of their appearance on the traditional fishing grounds is also consistent with the notion that they are coming from offshore. Tagging and telemetry studies were initiated in the offshore during the winter of 2006 and these may provide useful new information about the extent of inshore migration.

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Table 1. List of details for cod tagging experiments conducted mostly in the inshore of NAFO Div. 3KL from 1997-2006 (BB=Bonavista Bay, BBN=Bonavista Bay North, TB=Trinity Bay, SMB=St. Mary's Bay, CB=Conception Bay, TW=Twillingate; LT=Line trawl, OT=Otter trawl, HL=Hand line, CP=Cod pots).

Expt. number	Unit area	Release date First	Release date Last	Tagging site	Mean length (cm)	Number tagged
1997-012	3KD	23-Jul-97	24-Jul-97	Aspen Cove	51.9	260
1997-009	3LA	9-Jul-97	10-Jul-97	Plate Cove BB	53.3	464
1997-010	3LA	12-Jun-97	12-Jun-97	Open Hall BB	61.8	314
1997-003	3LB	1-May-97	5-May-97	NW Arm TB	56.8	589
1997-011	3LJ	30-Jul-97	13-Aug-97	Ferryland, Avalon Pen.	62.2	86
1997-013	3LJ	5-Aug-97	5-Aug-97	Pouch Cove, Avalon Pen.	56.9	220
1997-007	3LQ	25-Jun-97	26-Jun-97	Riverhead, SMB	56.9	701
1997-014	3LQ	9-Oct-97	14-Oct-97	Colinet, SMB	53.8	618
					Totals	3252

Expt. number	Unit area	Release date First	Release date Last	Tagging site	Mean length (cm)	Number tagged
1998-007	3KI	18-Jun-98	18_jun-98	SE FOGO	57.4	118
1999-022	3KH	22-Jun-99	22-Jun-99	JACKSONS CV NDB	67.3	3
1999-011	3KI	3-Jun-99	3-Jun-99	FOGO	61.2	122
1999-012	3KI	9-Jun-99	11-Jun-99	TOO GOOD ARM	60.8	639
1999-020	3KI	15-Jun-99	15-Jun-99	LUMSDEN FOGO	62.3	10
1999-021	3KI	16-Jun-99	16-Jun-99	SUMMERFORD TW	56.3	3
1999-025	3KI	22-Jun-99	25-Jun-99	TOO GOOD ARM	61.5	571
1999-026	3KI	6-Jul-99	7-Jul-99	TWILLINGATE	59.6	197
1999-034	3KI	22-Sep-99	22-Sep-99	LUMSDEN FOGO	51.9	101
1999-037	3KI	29-Sep-99	29-Sep-99	LADLE COVE	51.8	60
1999-008	3LA	4-May-99	5-May-99	PLATE COVE BB	62.3	309
1999-009	3LA	11-May-99	12-May-99	S. BONAVISTA BAY	63.2	80
1999-018	3LA	9-Jun-99	10-Jun-99	GREENSPOND BBN	56.7	242
1999-015	3LA	10-Jun-99	13-Jun-99	SANDY COVE BB	64.8	164
1999-016	3LA	10-Jun-99	13-Jun-99	SWALE ISLAND BB	61.2	372
1999-019	3LA	11-Jun-99	11-Jun-99	SILVER FOX ISLAND BBN	61.7	157
1999-017	3LA	11-Jun-99	12-Jun-99	BROOM CLOSE HD BB	63.7	305
1999-024	3LA	24-Jun-99	24-Jun-99	BONAVISTA BB	66.0	210
1999-033	3LA	21-Sep-99	21-Sep-99	WESLEYVILLE BBN	55.9	107
1999-041	3LA	22-Nov-99	22-Nov-99	HAPPY ADVENTURE BB	59.0	49
1999-007	3LB	27-Apr-99	4-May-99	SMITH SD TB	65.7	376
1999-010	3LB	28-May-99	28-May-99	SMITH SD TB	70.0	376
1999-013	3LB	7-Jun-99	8-Jun-99	NW ARM TB	62.7	224
1999-014	3LB	9-Jun-99	9-Jun-99	TRINITY TB	62.7	222
1999-028	3LB	6-Aug-99	6-Aug-99	NEW HARBOUR TB	48.5	486
1999-030	3LB	1-Sep-99	2-Sep-99	L. CATALINA TB	68.5	456
1999-035	3LB	21-Sep-99	21-Sep-99	L. CATALINA TB	64.0	203
1999-036	3LB	28-Sep-99	28-Sep-99	SMITH SND TB	62.4	16
1999-038	3LB	7-Oct-99	8-Oct-99	SMITH SND TB	62.8	142
1999-042	3LB	23-Nov-99	26-Nov-99	SMITH SND TB	68.8	514
1999-044	3LB	1-Dec-99	3-Dec-99	SMITH SND TB	70.4	476
1999-027	3LF	19-Jul-99	19-Jul-99	FOXTRAP CB	51.4	17
1999-029	3LF	25-Aug-99	25-Aug-99	KELLY'S ISLAND CB	55.4	177
1999-023	3LJ	28-Jun-99	28-Jun-99	FERRYLAND S. AV	61.1	21
1999-006	3LQ	7-May-99	10-May-99	ST. MARYS BAY	56.4	733
1999-031	3LQ	2-Sep-99	13-Sep-99	ST SHOTTS S. AV	61.9	280
					Total	8420

...cont'd.

Table 1 (Cont'd.)

Expt. number	Unit area	Release date First	Release date Last	Location	Mean length (cm)	Number tagged
2000-023	3KI	10-Aug-00	11-Aug-00	TOO GOOD ARM	57.3	252
2000-028	3KI	17-Aug-00	18-Aug-00	TOO GOOD ARM	55.0	145
2000-011	3LA	20-Apr-00	20-Apr-00	PLATE COVE BB	62.2	29
2000-016	3LA	26-May-00	26-May-00	RED COVE BB	75.7	24
2000-019	3LA	7-Jun-00	11-Jun-00	SOUTHERN BB	64.0	1032
2000-032	3LA	7-Sep-00	8-Sep-00	HAPPY ADVENTURE BB	48.8	8
2000-012	3LB	4-May-00	4-May-00	SMITH SND TB	69.3	69
2000-013	3LB	11-May-00	11-May-00	SMITH SND TB	81.6	45
2000-014	3LB	18-May-00	19-May-00	SMITH SND TB	71.2	333
2000-015	3LB	25-May-00	25-May-00	SMITH SND TB	67.4	273
2000-018	3LB	30-May-00	30-May-00	SMITH SND TB	68.6	315
2000-021	3LB	27-Jun-00	27-Jun-00	BONAVENTURE HD BB	88.0	213
2000-026	3LB	16-Aug-00	16-Aug-00	HOPEALL TB	51.4	16
2000-030	3LB	24-Aug-00	24-Aug-00	HOPEALL TB	51.9	32
2000-027	3LF	17-Aug-00	17-Aug-00	FOXTRAP CB	52.6	172
2000-029	3LF	23-Aug-00	23-Aug-00	FOXTRAP CB	55.4	50
2000-031	3LF	28-Aug-00	28-Aug-00	BAY DE VERDE CB	53.6	41
2000-017	3LG	27-May-00	27-May-00	OFFSHORE 3L	49.0	1
2000-022	3LJ	5-Jul-00	5-Jul-00	PETTY HARBOUR	60.3	28
2000-025	3LJ	15-Aug-00	15-Aug-00	PETTY HARBOUR	52.5	20
2000-020	3LQ	22-Jun-00	22-Jun-00	ST MARYS BAY	66.9	194
2000-024	3LQ	11-Aug-00	11-Aug-00	ST SHOTTS	61.5	122
					Total	3414
2001-019	3LA	18-Jun-01	27-Jun-01	OFF BONAVISTA	69.5	889
2001-021	3LA	20-Jun-01	22-Jun-01	PLATE COVE BB	69.2	1690
2001-012	3LB	15-May-01	17-May-01	SMITH SOUND 01	76.2	470
2001-015	3LB	29-May-01	1-Jun-01	SMITH SOUND 02	56.7	709
2001-016	3LB	29-May-01	1-Jun-01	SMITH SOUND 03	63.9	41
2001-017	3LB	6-Jun-01	6-Jun-01	SMITH SOUND 04	56.3	19
2001-020	3LB	28-Jun-01	28-Jun-01	WESTERN TB	72.7	142
2001-022	3LB	15-Jun-01	21-Jun-01	SMITH SOUND 05	71.9	48
2001-024	3LB	18-Jul-01	19-Jul-01	HOPEALL TB	55.2	65
2001-026	3LB	14-Nov-01	10-Dec-01	SMITH SOUND 06	64.3	993
2001-013	3LD/A/I	10-May-01	17-May-01	OFFSHORE 3L	50.4	16
2001-023	3LJ	12-Jul-01	12-Jul-01	PETTY HARBOUR	49.8	157
2001-014	3LQ	6-Jun-01	6-Jun-01	HOLYROOD POND	51.7	39
2001-018	3LQ	13-Jun-01	15-Jun-01	RIVERHEAD SMB	60.9	683
					Total	5961
2002-018	3KI	10-Jul-02	17-Jul-02	NEW WORLD ISLAND	53.4	590
2002-020	3KI	16-Jul-02	16-Jul-02	SUMMERFORD TW	49.4	40
2002-021	3KI	18-Jul-02	18-Jul-02	CLAM ROCKS TW	51.7	20
2002-022	3KI	25-Jul-02	26-Jul-02	NORTH FOGO ISLAND	49.7	100
2002-015	3LA	23-Jun-02	30-Jun-02	CAPE BONAVISTA	74.0	1612
2002-016	3LA	26-Jun-02	1-Jul-02	SOUTHERN BB	56.8	15
2002-019	3LA	16-Jul-02	25-Jul-02	SWALE ISLAND BB	63.4	108
2002-009	3LB	17-Apr-02	17-Apr-02	SMITH SOUND (LT)	72.1	65
2002-010	3LB	22-May-02	23-May-02	SMITH SOUND (HL)	66.2	913
2002-013	3LB	21-Jun-02	21-Jun-02	SMITH SOUND (OT)	72.0	152
2002-014	3LB	22-Jun-02	22-Jun-02	BONAVENTURE HEAD TB	64.3	4
2002-017	3LB	1-Jul-02	2-Jul-02	SPILLAR'S LEDGE TB	71.9	254
2002-023	3LB	31-Oct-02	14-Nov-02	SMITH SOUND (HL)	67.5	981
2002-011	3LQ	12-Jun-02	13-Jun-02	MALL BAY, SMB	54.6	148
					Total	5002
2003-001	3LB	9-Apr-03	9-Apr-03	SMITH SOUND (OT)	59.4	472
2004-001	3LB	1-Dec-04	2-Dec-04	SMITH SOUND (HL)	61.4	932
2005-002	3KI	28-Jun-05	29-Jun-05	TOO GOOD ARM (HL)	54.3	190
2005-008	3LA	1-Dec-05	1-Dec-05	NEWMAN SOUND	57.6	8
2005-001	3LB	3-May-05	19-May-05	SMITH SOUND (HL)	71.6	667
2005-003	3LB	16-Nov-05	16-Nov-05	SMITH SOUND (HL)	66.0	110
2005-009	3LB	13-Dec-05	13-Dec-05	SMITH SOUND (HL)	66.5	51
2006-006	3KI	15-Jun-06	23-Jun-06	TOO GOOD ARM	56.4	488
2006-007	3KI	27-Jun-06	8-Jul-06	TWILLINGATE	55.8	1282
2006-008	3KI	5-Jul-06	7-Jul-06	FOGO	53.7	941
2006-005	3LA	4-Jun-06	10-Jun-06	BONAVISTA	74.9	1345
2006-001	3LB	26-Apr-06	29-Apr-06	SMITH SOUND (HL)	75.8	384
2006-002	3LB	30-Apr-06	30-Apr-06	NW ARM TB	56.6	9
2006-003	3LB	30-Apr-06	1-May-06	SMITH SOUND (OT)	92.5	97
2006-004	3LB	9-May-06	25-May-06	SMITH SOUND HL	84.5	390
2006-009	3LB	8-Nov-06	22-Nov-06	SMITH SOUND (HL)	68.3	654
2006-010	3LB	16-Nov-06	22-Nov-06	SMITH SOUND (CP)	68.2	264
2006-011	3LB	25-Nov-06	30-Nov-06	SMITH SOUND (CP)	67.6	319
2006-012	3LB	26-Nov-06	30-Nov-06	SMITH SOUND (HL)	72.3	617

Table 2. Annual summary of reported recaptures (all tag types combined) for cod tagged and released in the inshore of NAFO Div. 3KL from 1997 onwards (BB = Bonavista Bay, BBN=Bonavista Bay North, TB=Trinity Bay, CB=Conception Bay, SMB=St. Mary's Bay, NDB=Notre Dame Bay, TW=Twillingate, S. AV=southern Avalon Peninsula, CP=Cod pots, HL=Handline, LT=Line trawl, OT=Otter trawl).

Expt.	Unit	Release date			Mean	Number	Reported recaptures										
number	area	First	Last	Tagging site	length (cm)	tagged	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	unk
1997-012	3KI	23-Jul-97	24-Jul-97	Aspen Cove	51.9	260	1	15	5	2	1	0	0	0	0	0	0
1997-009	3LA	9-Jul-97	10-Jul-97	Plate Cove BB	53.3	464	1	23	28	10	7	3	2	0	0	1	1
1997-010	3LA	12-Jun-97	12-Jun-97	Open Hall BB	61.8	314	0	11	15	9	3	4	4	0	0	0	1
1997-003	3LB	1-May-97	5-May-97	NW Arm TB	56.8	589	2	10	23	7	7	8	5	0	0	0	0
1997-011	3LJ	30-Jul-97	13-Aug-97	Ferryland, Avalon Pen.	62.2	86	5	2	4	4	0	0	0	0	0	0	0
1997-013	3LJ	5-Aug-97	5-Aug-97	Pouch Cove, Avalon Pen.	56.9	220	4	8	9	7	1	2	0	0	0	0	0
1997-007	3LQ	25-Jun-97	26-Jun-97	Riverhead, SMB	56.9	701	21	49	74	26	8	5	1	0	1	0	5
1997-014	3LQ	9-Oct-97	14-Oct-97	Colinet, SMB	53.8	618	1	16	22	17	9	2	0	1	0	0	1
					Totals	3252	35	134	180	82	36	24	12	1	1	1	8
1998-007	3KI	18-Jun-98	18_jun-98	SE FOGO	57.4	118	.	14	9	2	0	0	0	0	0		0
1999-011	3KI	3-Jun-99	3-Jun-99	FOGO	61.2	122	.	.	22	3	1	0	0	0	0	0	0
1999-012	3KI	9-Jun-99	11-Jun-99	TOO GOOD ARM, TW	60.8	639	.	.	167	19	9	1	1	0	0	0	0
1999-025	3KI	22-Jun-99	25-Jun-99	TOO GOOD ARM, TW	61.5	571	.	.	151	19	3	2	1	0	0	0	0
1999-026	3KI	6-Jul-99	7-Jul-99	TWILLINGATE	59.6	197	.	.	82	7	2	0	0	0	0	0	0
1999-034	3KI	22-Sep-99	22-Sep-99	LUMSDEN FOGO	51.9	101	.	.	0	1	4	0	0	0	0	0	0
1999-037	3KI	29-Sep-99	29-Sep-99	LADLE COVE	51.8	60	.	.	0	4	0	0	0	0	0	0	0
1999-008	3LA	4-May-99	5-May-99	PLATE COVE BB	62.3	309	.	.	28	9	6	3	1	0	0	0	0
1999-009	3LA	11-May-99	12-May-99	S. BONAVISTA BAY	63.2	80	.	.	11	6	3	0	1	0	0	0	0
1999-018	3LA	9-Jun-99	10-Jun-99	GREENSPOND BBN	56.7	242	.	.	13	7	3	0	0	1	0	0	0
1999-015	3LA	10-Jun-99	13-Jun-99	SANDY COVE BB	64.8	164	.	.	32	8	8	6	3	0	0	0	0
1999-016	3LA	10-Jun-99	13-Jun-99	SWALE ISLAND BB	61.2	372	.	.	31	15	9	3	2	0	1	0	0
1999-019	3LA	11-Jun-99	11-Jun-99	SILVER FOX ISLAND BBN	61.7	157	.	.	21	8	4	3	0	1	0	0	0
1999-017	3LA	11-Jun-99	12-Jun-99	BROOM CLOSE HD BB	63.7	305	.	.	13	7	1	0	0	0	0	0	0
1999-024	3LA	24-Jun-99	24-Jun-99	BONAVISTA BB	66.0	210	.	.	7	12	5	1	2	1	1	1	0
1999-033	3LA	21-Sep-99	21-Sep-99	WESLEYVILLE BBN	55.9	107	.	.	0	0	3	0	0	0	0	0	0
1999-007	3LB	27-Apr-99	4-May-99	SMITH SD TB	65.7	376	.	.	23	15	23	19	3	1	0	1	0
1999-010	3LB	28-May-99	28-May-99	SMITH SD TB	70.0	376	.	.	11	8	5	6	7	1	0	0	2
1999-013	3LB	7-Jun-99	8-Jun-99	NW ARM TB	62.7	224	.	.	16	6	11	6	2	1	0	0	0
1999-014	3LB	9-Jun-99	9-Jun-99	TRINITY TB	62.7	222	.	.	4	7	7	6	6	0	1	0	1
1999-028	3LB	6-Aug-99	6-Aug-99	NEW HARBOUR TB	48.5	486	.	.	38	19	11	4	1	0	0	0	2
1999-030	3LB	1-Sep-99	2-Sep-99	L. CATALINA TB	68.5	456	.	.	17	15	17	13	11	2	0	0	0
1999-035	3LB	21-Sep-99	21-Sep-99	L. CATALINA TB	64.0	203	.	.	5	2	5	4	0	0	0	0	0
1999-038	3LB	7-Oct-99	8-Oct-99	SMITH SND TB	62.8	142	.	.	0	13	6	6	0	0	0	0	0
1999-042	3LB	23-Nov-99	26-Nov-99	SMITH SND TB	68.8	514	.	.	0	32	22	13	15	2	0	1	0
1999-044	3LB	1-Dec-99	3-Dec-99	SMITH SND TB	70.4	476	.	.	0	34	24	13	8	1	1	0	1
1999-029	3LF	25-Aug-99	25-Aug-99	KELLY'S ISLAND CB	55.4	177	.	.	12	7	4	0	0	0	0	0	0
1999-006	3LQ	7-May-99	10-May-99	ST. MARYS BAY	56.4	733	.	.	85	70	31	11	5	2	0	0	5
1999-031	3LQ	2-Sep-99	13-Sep-99	ST SHOTTS S. AV	61.9	280	.	.	38	21	14	4	0	0	0	0	5
					Total	8420	.	.	840	378	243	125	69	14	4	3	16

cont'd.

Table 2 (Cont'd.)

Expt number	Unit area	Release date First	Release date Last	Location	Mean length (cm)	Number tagged	Reported recaptures 2000	2001	2002	2003	2004	2005	2006	unk
2000-023	3KI	10-Aug-00	11-Aug-00	TOO GOOD ARM	57.3	252	10	11	0	0	0	0	0	0
2000-028	3KI	17-Aug-00	18-Aug-00	TOO GOOD ARM	55.0	145	9	3	0	0	0	0	0	0
2000-019	3LA	7-Jun-00	11-Jun-00	SOUTHERN BB	64.0	1032	90	45	10	2	0	0	2	0
2000-012	3L[illegible]	4-May-00	4-May-00	SMITH SND TB	69.3	69	5	4	0	2	0	0	1	0
2000-014	3LB	18-May-00	19-May-00	SMITH SND TB	71.2	333	22	18	20	12	0	0	1	0
2000-015	3LB	25-May-00	25-May-00	SMITH SND TB	67.4	273	11	8	8	4	0	0	1	1
2000-018	3LB	30-May-00	30-May-00	SMITH SND TB	68.6	315	10	15	5	7	0	1	0	1
2000-021	3LB	27-Jun-00	27-Jun-00	BONAVENTURE HD BB	88.0	213	11	9	3	2	0	0	0	0
2000-030	3LB	24-Aug-00	24-Aug-00	HOPEALL TB	51.9	32	0	0	1	0	0	0	0	0
2000-027	3LF	17-Aug-00	17-Aug-00	FOXTRAP CB	52.6	172	8	4	4	0	0	0	0	0
2000-029	3LF	23-Aug-00	23-Aug-00	FOXTRAP CB	55.4	50	1	1	1	0	1	0	0	0
2000-020	3LQ	22-Jun-00	22-Jun-00	ST MARYS BAY	66.9	194	20	21	10	4	1	0	0	2
2000-024	3LQ	11-Aug-00	11-Aug-00	ST SHOTTS	61.5	122	20	14	4	0	1	0	0	5
					Total	3414	227	163	67	33	4	1	5	11
2001-019	3LA	18-Jun-01	27-Jun-01	OFF BONAVISTA	69.5	889	30	46	25	3	0	5	1	
2001-021	3LA	20-Jun-01	22-Jun-01	PLATE COVE BB	69.2	1690	305	108	28	2	1	6	0	
2001-012	3LB	15-May-01	17-May-01	SMITH SOUND 01	76.2	470	25	23	16	3	2	4	0	
2001-015	3LB	29-May-01	1-Jun-01	SMITH SOUND 02	56.7	709	46	40	17	3	1	4	0	
2001-020	3LB	28-Jun-01	28-Jun-01	WESTERN TB	72.7	142	7	11	3	0	2	1	1	
2001-022	3LB	15-Jun-01	21-Jun-01	SMITH SOUND 05	71.9	48	3	3	3	0	0	0	0	
2001-024	3LB	18-Jul-01	19-Jul-01	HOPEALL TB	55.2	65	9	4	1	0	0	0	0	
2001-026	3LB	14-Nov-01	10-Dec-01	SMITH SOUND 06	64.3	993	0	98	35	8	1	3	0	
2001-023	3LJ	12-Jul-01	12-Jul-01	PETTY HARBOUR	49.8	157	19	9	0	0	0	0	0	
2001-018	3LQ	13-Jun-01	15-Jun-01	RIVERHEAD SMB	60.9	683	130	56	12	5	1	1	8	
					Total	5961	582	406	142	24	8	24	10	
2002-018	3KI	10-Jul-02	17-Jul-02	NEW WORLD ISLAND	53.4	590	65	0	6	0	0	0		
2002-022	3KI	25-Jul-02	26-Jul-02	NORTH FOGO ISLAND	49.7	100	7	0	0	0	0	0		
2002-015	3LA	23-Jun-02	30-Jun-02	CAPE BONAVISTA	74.0	1612	140	99	8	2	4	0		
2002-019	3LA	16-Jul-02	25-Jul-02	SWALE ISLAND BB	63.4	108	15	1	1	0	0	1		
2002-009	3LB	17-Apr-02	17-Apr-02	SMITH SOUND (LT)	72.1	65	2	0	0	0	1	0		
2002-010	3LB	22-May-02	23-May-02	SMITH SOUND (HL)	66.2	913	109	52	10	5	4	0		
2002-013	3LB	21-Jun-02	21-Jun-02	SMITH SOUND (OT)	72.0	152	23	6	1	0	0	0		
2002-017	3LB	1-Jul-02	2-Jul-02	SPILLAR'S LEDGE TB	71.9	254	20	18	0	1	0	0		
2002-023	3LB	31-Oct-02	14-Nov-02	SMITH SOUND (HL)	67.5	981	2	89	13	5	8	0		
2002-011	3LQ	12-Jun-02	13-Jun-02	MALL BAY, SMB	54.6	148	18	10	4	3	0	1		
					Total	5002	408	277	43	16	17	2		
2004-001	3LB	1-Dec-04	2-Dec-04	SMITH SOUND (HL)	61.4	932	0	24	19	2				
2005-002	3KI	28-Jun-05	29-Jun-05	TOO GOOD ARM (HL)	54.3	190	7	5	1					
2005-008	3LA	1-Dec-05	1-Dec-05	NEWMAN SOUND	57.6	8	0	0	0					
2005-001	3LB	3-May-05	19-May-05	SMITH SOUND (HL)	71.6	667	9	14	0					
2005-003	3LB	16-Nov-05	16-Nov-05	SMITH SOUND (HL)	66.0	110	0	2	1					
2005-008	3LA	1-Dec-05	1-Dec-05	NEWMAN SOUND	57.6	8	0	0	0					
2005-009	3LB	13-Dec-05	13-Dec-05	SMITH SOUND (HL)	66.5	51	0	2	0					
					Total	1034	16	23	2					
2006-006	3KI	15-Jun-06	23-Jun-06	TOO GOOD ARM	56.4	488	45	0						
2006-007	3KI	27-Jun-06	8-Jul-06	TWILLINGATE	55.8	1282	99	0						
2006-008	3KI	5-Jul-06	7-Jul-06	FOGO	53.7	941	24	0						
2006-005	3LA	4-Jun-06	10-Jun-06	BONAVISTA	74.9	1345	31	0						
2006-001	3LB	26-Apr-06	29-Apr-06	SMITH SOUND (HL)	75.8	376	18	0						
2006-002	3LB	30-Apr-06	30-Apr-06	NORTHWEST ARM	56.6	9	0	0						
2006-003	3LB	30-Apr-06	1-May-06	SMITH SOUND (OT)	92.5	105	4	0						
2006-004	3LB	9-May-06	25-May-06	SMITH SOUND HL	84.5	390	7	0						
					Total	6628	228	0						

*Note: experiments 2006-009 to 2006-012 were conducted late in 2006 after the directed fishery was closed.

Table 3A. Reported landings of cod from inshore unit areas in NAFO Div. 3KL since 1998. Most of the landings in 3Lb during 2003 were from a fish kill in Smith Sound, Trinity Bay during April. Total reported offshore landings from 3KL have been <50 t per annum.

Year	3Ka	3Kd	3Kh	3Ki	3La	3Lb	3Lf	3Lj	3Lq	Totals
1998	5	122	661	1,331	1,113	649	411	402	147	4,840
1999	24	205	1,100	2,299	1,462	1,686	702	698	268	8,444
2000	13	57	204	1,188	1,477	1,442	398	451	211	5,441
2001	27	184	440	1,117	1,546	2,042	592	486	434	6,868
2002	8	37	133	444	1,150	1,503	304	288	285	4,153
2003	4	6	14	32	74	853	19	11	28	1,041
2004	1	4	26	120	161	140	70	86	23	630
2005	12	33	133	326	188	217	127	132	35	1,203
2006	32	68	286	573	410	478	260	221	47	2,376

Table 3B. Reported landings of cod from unit areas in NAFO Subdiv. 3Ps since 1997.

Year	3Psa	3Psb	3Psc	3Psd	3Pse	3Psf	3Psg	3Psh	Totals
1997	1,191	1,791	4,956	256	110	90	0	1,314	9,708
1998	1,573	2,428	7,102	1,274	698	1,108	377	4,713	19,274
1999	2,697	3,206	11,654	873	360	2,856	804	2,109	24,558
2000	1,718	2,263	8,774	249	1,003	3,183	156	7,742	25,087
2001	1,273	2,398	5,853	343	262	1,404	120	3,349	15,002
2002	1,353	2,302	4,892	356	1,389	1,144	92	3,292	14,819
2003	1,328	2,536	4,825	234	1,401	1,358	171	3,408	15,261
2004	1,403	2,113	4,388	429	831	1,239	202	3,809	14,414
2005	1,286	2,070	4,175	512	1,303	1,922	130	3,326	14,724

Table 3C. Reported landings of cod from unit areas in NAFO Subdiv. 3Pn and Div. 4RS since 1997.

Year	3Pn	4Rd	4Rc	4Rb	4Ra	4Sv	4Sw	4Sxyz	Totals
1997	2,006	299	593	600	806	141	327	20	4,792
1998	870	636	281	367	387	61	476	33	3,111
1999	1,165	944	908	1,478	1,551	124	632	88	6,890
2000	1,478	800	728	1,439	1,215	180	660	140	6,640
2001	1,740	717	995	1,269	1,310	252	570	81	6,934
2002	1,713	591	795	1,377	1,172	123	686	69	6,526
2003	35	59	14	55	20	19	60	13	276
2004	727	335	288	609	569	97	433	54	3,112
2005	812	783	441	698	967	278	293	21	4,294
2006	721	1535	458	685	1228	297	428	32	5,385

Table 4. Details of the 2006 inshore fishery for cod in NAFO Div. 2J+3KL.

Area	NAFO unit	2006 season dates	Total licences	Active licences	Reported landings mt
Labrador	2J	Aug 14-Sept 3	155	52	44
Northern Peninsula	3Ka	Aug 7 - 27	161	79	60
White Bay	3Kd	Sept 5 - 25	171	88	76
Notre Dame Bay west	3Kh	Sept 5 - 25	57	42	40
Notre Dame Bay central	3Kh/i	Oct 2-22	129	100	83
Notre Dame Bay east	3Ki	Aug 7-27	617	502	574
Bonavista Bay	3La	Aug 28 - Sept 17	342	285	317
Trinity Bay	3Lb	Aug 21 - Sept 10	345	300	366
Conception Bay	3Lf	Aug 21 - Sept 10	397	251	282
eastern Avalon	3Lj	Sept 5 - 25	204	136	140
St. Mary's Bay	3Lq	Aug 7-27	91	32	34

Note: landings reported here do not include recreational or sentinel fishery.

Table 5. The proportion of tags returned by year and region based on a high-reward tagging study 3L_INS=3Lf/j/q; 3Ps_PB=3Psc; 3Ps_FB=3Psb; 3Ps_BB=3Psa/d; OFF_SH=3Pse/f/g/h and Divs 3NO; 3PN_4RS=Subdiv. 3Pn and Div. 4R and 4S.

	Single tag reporting rates									
Region	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
3K_IN	0.76	0.76	0.76	0.76	1.00	0.76	0.76	0.76	0.76	0.50
3L_INN	0.76	0.76	0.76	0.76	1.00	0.76	0.76	0.76	0.76	0.45
3L_INS	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
OFF_SH	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.57	0.68
3Ps_PB	0.70	0.70	0.70	0.85	0.85	0.85	0.85	0.85	0.63	0.36
3Ps_FB	0.70	0.70	0.70	0.85	0.85	0.85	0.85	0.85	0.85	0.85
3Ps_BB	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
3PN_4RS	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53

	Double tag reporting rates									
Region	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
3K_IN	0.85	0.85	0.85	0.85	1.00	0.85	0.85	0.85	0.85	0.64
3L_INN	0.85	0.85	0.85	0.85	1.00	0.85	0.85	0.85	0.85	0.59
3L_INS	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
OFF_SH	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
3Ps_PB	0.80	0.80	0.80	0.91	0.91	0.91	0.91	0.91	0.75	0.50
3Ps_FB	0.80	0.80	0.80	0.91	0.91	0.91	0.91	0.91	0.91	0.91
3Ps_BB	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
3PN_4RS	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66

Table 6. Annual estimates of exploitation (harvest rate, in percent) by experiment for cod tagged in NAFO Div. 3KL during 1997-2006. Recaptures were adjusted to account for tag reporting rates, tag loss and assumed natural mortality (m=0.4 per yr). Estimates for experiments where >50 cod were tagged are shown. Shaded cells represent partial estimates as fishery in that year was already in progress. Boxed groups of cells indicate values used to compute annual means. See text for further details.

Unit area	Expt. number	Release dates First	Release dates Last	Area of release	Number tagged	% harvested (50-85 cm FL at release) 1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
3KI	1997012	23-Jul-97	24-Jul-97	ASPEN COVE	260	1.4	16.5	7.2	5.9	8.3					
3KI	1998007	18-Jun-98	18_jun-98	SE FOGO	118		20.5	26.7	12.7	0.0	0.0				
3KI	1999011	3-Jun-99	3-Jun-99	FOGO	122			28.4	10.2	4.1	0.0	0.0			
3KI	1999012	9-Jun-99	11-Jun-99	TOO GOOD ARM	639			41.8	13.7	9.1	2.3	3.1			
3KI	1999025	22-Jun-99	25-Jun-99	TOO GOOD ARM	571			40.5	15.2	3.5	4.7	3.7			
3KI	1999026	6-Jul-99	7-Jul-99	TWILLINGATE	197			76.4	46.4	30.8	0.0	0.0			
3KI	1999034	22-Sep-99	22-Sep-99	LUMSDEN FOGO	101			0.0	0.0	10.3	0.0	0.0			
3KI	1999037	29-Sep-99	29-Sep-99	LADLE COVE	60			0.0	33.1	0.0	0.0	0.0			
3KI	2000023	10-Aug-00	11-Aug-00	TOO GOOD ARM	252				9.6	13.1	0.0	0.0	0.0		
3KI	2000028	17-Aug-00	18-Aug-00	TOO GOOD ARM	145				15.1	5.1	0.0	0.0	0.0		
3KI	2002018	10-Jul-02	17-Jul-02	NEW WORLD ISLAND	590						27.1	0.0	8.9	0.0	0.0
3KI	2002022	25-Jul-02	26-Jul-02	NORTH FOGO ISLAND	100						19.8	0.0	0.0	0.0	0.0
3KI	2005002	28-Jun-05	29-Jun-05	TOO GOOD ARM (HL)	190									7.0	13.8
3KI	2006006	15-Jun-06	23-Jun-06	TOO GOOD ARM	488										35.0
3KI	2006007	27-Jun-06	8-Jul-06	TWILLINGATE	1282										24.9
3KI	2006008	5-Jul-06	7-Jul-06	FOGO	941										10.4
				Annual means			17.7	38.5	15.9	8.8	2.0	1.5	4.8	1.5	21.1

						1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
3LA	1997009	9-Jul-97	10-Jul-97	PLATE COVE	464	0.7	18.9	32.9	37.0	24.8					
3LA	1997010	12-Jun-97	12-Jun-97	OPEN HALL	314	0.0	10.2	20.8	27.1	19.3					
3LA	1999008	4-May-99	5-May-99	PLATE COVE BB	309			17.1	11.0	9.2	10.7	5.9			
3LA	1999015	10-Jun-99	13-Jun-99	SANDY COVE BB	164			14.0	14.7	8.6	0.0	0.0			
3LA	1999016	10-Jun-99	13-Jun-99	SWALE ISLAND BB	372			15.9	8.3	10.6	18.6	13.5			
3LA	1999017	11-Jun-99	12-Jun-99	BROOM CLOSE HD BB	305			17.7	16.7	13.5	11.9	12.7			
3LA	1999018	9-Jun-99	10-Jun-99	GREENSPOND BBN	242			17.1	9.1	10.1	13.7	0.0			
3LA	1999019	11-Jun-99	11-Jun-99	SILVER FOX ISLAND BBN	157			15.4	15.2	3.0	0.0	0.0			
3LA	1999024	24-Jun-99	24-Jun-99	BONAVISTA BB	210			5.8	15.9	9.7	4.3	11.5			
3LA	1999033	21-Sep-99	21-Sep-99	WESLEYVILLE BBN	107			0.0	0.0	8.2	0.0	0.0			
3LA	2000019	7-Jun-00	11-Jun-00	SOUTHERN BB	1032				15.8	11.7	4.7	1.7	0.0		
3LA	2001019	18-Jun-01	27-Jun-01	OFF BONAVISTA	889					4.7	15.2	13.3	3.0	0.0	
3LA	2001021	20-Jun-01	22-Jun-01	PLATE COVE BB	1690					22.9	22.8	10.5	1.3	0.9	
3LA	2002015	23-Jun-02	30-Jun-02	CAPE BONAVISTA	1612						13.9	16.7	3.0	1.1	6.2
3LA	2002019	16-Jul-02	25-Jul-02	SWALE ISLAND BB	108						34.2	4.8	9.2	0.0	0.0
3LA	2006-005	4-Jun-06	10-Jun-06	BONAVISTA	1345										5.4
				Annual means		0.7	15.4	19.1	17.4	13.3	13.7	11.0	2.5	1.1	5.0

...cont'd.

Table 6 (Cont'd.)

						1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
3LB	1997003	1-May-97	5-May-97	NW Arm TB	589	0.8	5.2	16.5	10.1	8.6	.	.	.	.	
3LB	1999007	27-Apr-99	4-May-99	SMITH SD TB	376			11.1	12.7	27.3	61.5	15.1	.	.	
3LB	1999010	28-May-99	28-May-99	SMITH SD TB	376			8.9	11.2	11.3	25.7	51.5	.	.	
3LB	1999013	7-Jun-99	8-Jun-99	NW ARM TB	224			13.6	9.2	22.5	29.6	10.1	.	.	
3LB	1999014	9-Jun-99	9-Jun-99	TRINITY TB	222			3.6	9.6	13.0	21.6	44.0	.	.	
3LB	1999028	6-Aug-99	6-Aug-99	NEW HARBOUR TB	486			14.2	9.2	6.3	0.0	0.0	.	.	
3LB	1999030	1-Sep-99	2-Sep-99	L. CATALINA TB	456			7.0	10.2	16.4	29.0	43.1	.	.	
3LB	1999035	21-Sep-99	21-Sep-99	L. CATALINA TB	203			4.5	3.2	9.6	18.1	0.0	.	.	
3LB	1999036	28-Sep-99	28-Sep-99	SMITH SND TB	16			0.0	20.5	0.0	59.0	0.0	.	.	
3LB	1999038	7-Oct-99	8-Oct-99	SMITH SND TB	142			0.0	28.8	22.2	54.2	0.0	.	.	
3LB	1999042	23-Nov-99	26-Nov-99	SMITH SND TB	514			0.0	14.2	13.2	17.7	33.7	.	.	
3LB	1999044	1-Dec-99	3-Dec-99	SMITH SND TB	476			0.0	15.0	14.7	19.7	18.6	.	.	
3LB	2000012	4-May-00	4-May-00	SMITH SND TB	69				13.2	15.2	0.0	24.3	0.0	.	
3LB	2000013	11-May-00	11-May-00	SMITH SND TB	45				10.4	20.9	0.0	0.0	0.0	.	
3LB	2000014	18-May-00	19-May-00	SMITH SND TB	333				11.6	12.6	33.2	41.3	0.0	.	
3LB	2000015	25-May-00	25-May-00	SMITH SND TB	273				7.2	6.6	16.1	13.8	0.0	.	
3LB	2000018	30-May-00	30-May-00	SMITH SND TB	315				5.8	12.6	9.3	16.1	0.0	.	
3LB	2000021	27-Jun-00	27-Jun-00	BONAVENTURE HD BB	213				8.3	9.5	7.4	5.8	0.0	.	
3LB	2000030	24-Aug-00	24-Aug-00	HOPEALL TB	32				0.0	0.0	26.8	0.0	0.0	.	
3LB	2001012	15-May-01	17-May-01	SMITH SOUND 01	470					7.3	15.8	17.5	4.6	6.4	.
3LB	2001015	29-May-01	1-Jun-01	SMITH SOUND 02	709					11.9	20.7	11.2	4.5	4.2	.
3LB	2001016	29-May-01	1-Jun-01	SMITH SOUND 03	41					4.3	14.9	13.9	0.0	0.0	.
3LB	2001020	28-Jun-01	28-Jun-01	WESTERN TB	142					7.4	22.8	11.3	0.0	22.5	.
3LB	2001022	15-Jun-01	21-Jun-01	SMITH SOUND 05	48					9.4	19.0	28.5	0.0	0.0	.
3LB	2001024	18-Jul-01	19-Jul-01	HOPEALL TB	65					19.9	36.2	19.0	0.0	0.0	.
3LB	2001026	14-Nov-01	10-Dec-01	SMITH SOUND 06	993					0.0	23.0	14.1	7.2	1.1	.
3LB	2002009	17-Apr-02	17-Apr-02	SMITH SOUND (LT)	65						5.5	0.0	0.0	0.0	31.5
3LB	2002010	22-May-02	23-May-02	SMITH SOUND (HL)	913						20.9	17.7	7.4	6.4	14.6
3LB	2002013	21-Jun-02	21-Jun-02	SMITH SOUND (OT)	152						25.1	11.7	3.3	0.0	0.0
3LB	2002017	1-Jul-02	2-Jul-02	SPILLAR'S LEDGE TB	254						14.6	23.4	0.0	3.8	0.0
3LB	2002023	31-Oct-02	14-Nov-02	SMITH SOUND (HL)	981						0.3	17.7	5.7	3.9	16.5
3LB	2004001	1-Dec-04	2-Dec-04	SMITH SOUND (HL)	932								0.0	6.1	12.3
3LB	2005-001	5-May-05	19-May-05	SMITH SOUND (HL)	667									2.3	8.5
3LB	2005-003	16-Nov-05	16-Nov-05	SMITH SOUND (HL)	110										11.0
3LB	2005-009	13-Dec-05	13-Dec-05	SMITH SOUND (HL)	51										15.4
3LB	2006-001	26-Apr-06	29-Apr-06	SMITH SOUND (HL)	384										10.1
3LB	2006-003	30-Apr-06	1-May-06	SMITH SOUND (OT)	97										8.7
3LB	2006-004	9-May-06	25-May-06	SMITH SOUND HL	390										4.1
				Annual means		0.8	5.2	11.8	11.0	12.8	22.1	16.6	5.2	4.5	9.6

Table 7. Annual distribution of recaptures of cod tagged and released in various regions of NAFO Div. 3KL and eastern Subdiv. 3Ps during 1997-2005. Recapture numbers were adjusted by region specific reporting rates estimated from a high reward tagging study. Shaded cells give the percentage recaptured in the area of release. Area 3PsOFF=3Ps/e/f/g/h.

Release area	Release year	Number tagged	Recapture year	Adjusted nos. recap'd	% of annual recaptures													
					3K	3LA	3LB	3LF	3LJ	3LQ	3NO	3Psa	3Psb	3Psc	3Psd	3PsOFF	4RS3Pn	unk
3KD	1997	260	1997	1	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			1998	19	59.4	40.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			1999	7	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0
.			2000	3	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2001	1	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3KI	1998	118	1998	17	92.3	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			1999	12	67.5	32.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2000	3	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3KI	1999	1703	1999	540	93.7	4.2	0.0	0.5	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.9
.			2000	68	73.6	18.5	3.4	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	2.8	0.0
.			2001	19	47.4	52.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2002	4	31.7	68.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2003	3	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3KI	2000	397	2000	24	94.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2001	14	85.7	7.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3KI	2002	750	2002	99	98.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2003	1	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2004	8	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3KI	2005	190	2005	9	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2006	9	75.9	24.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3KI	2006	2711	2006	277	99.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

cont'd.

Table 7 (Cont'd.)

Release area	Release year	Number tagged	Recapture year	Adjusted nos. recap'd	% of annual recaptures													
					3K	3LA	3LB	3LF	3LJ	3LQ	3NO	3Psa	3Psb	3Psc	3Psd	3PsOFF	4RS3Pn	unk
3LA	1997	778	1997	1	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			1998	44	17.4	52.7	20.3	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	0.0	0.0	3.0
.			1999	54	30.9	48.1	13.5	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	4.9
.			2000	23	15.3	52.4	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4
.			2001	10	0.0	70.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
.			2002	9	0.0	42.9	57.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2003	8	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2006	2	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LA	1999	1995	1999	200	19.5	75.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2000	93	24.4	64.8	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9
.			2001	43	18.6	67.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2002	20	4.9	51.9	30.9	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	6.5
.			2003	11	0.0	44.8	55.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2004	4	32.6	0.0	32.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.8	0.0	0.0
.			2005	3	0.0	52.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.4	0.0	0.0	0.0	0.0
.			2006	2	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LA	2000	1093	2000	122	17.2	74.7	5.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	2.2
.			2001	47	2.1	83.0	12.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
.			2002	14	9.4	90.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2003	3	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2006	4	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LA	2001	2580	2001	335	20.9	71.0	6.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
.			2002	196	5.9	76.4	17.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
.			2003	69	0.0	15.0	85.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2004	6	22.2	61.1	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2005	1	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2006	21	0.0	51.0	35.9	0.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0	0.0	0.0
3LA	2002	1735	2002	199	1.2	83.0	15.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2003	130	1.0	9.7	86.5	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.0
.			2004	12	0.0	77.8	22.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2005	3	0.0	0.0	48.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.6	0.0	0.0
.			2006	9	23.1	0.0	76.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LA	2006	1345	2006	55	7.3	75.6	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

cont'd.

Table 7 (Cont'd.)

Release area	Release year	Number tagged	Recapture year	Adjusted nos. recap'd	% of annual recaptures													
					3K	3LA	3LB	3LF	3LJ	3LQ	3NO	3Psa	3Psb	3Psc	3Psd	3PsOFF	4RS3Pn	unk
3LB	1997	589	1997	3	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			1998	12	0.0	0.0	87.7	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0	0.0	0.0
.			1999	29	17.1	31.6	47.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
.			2000	9	0.0	41.4	44.7	0.0	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2001	7	13.6	13.6	40.8	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.0	0.0	0.0	0.0
.			2002	10	0.0	48.4	51.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2003	7	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LB	1999	3339	1999	147	1.8	13.9	79.7	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	2.7
.			2000	192	8.7	33.3	50.4	4.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	2.5
.			2001	131	9.9	30.4	54.8	2.3	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.8
.			2002	117	0.0	46.1	48.4	1.1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	3.4
.			2003	68	0.0	7.7	90.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
.			2004	11	0.0	23.5	48.8	0.0	0.0	0.0	0.0	0.0	0.0	14.6	0.0	13.0	0.0	0.0
.			2005	3	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2006	3	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LB	2000	1296	2000	80	9.6	34.5	49.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3
.			2001	57	5.2	29.6	61.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0
.			2002	48	0.0	38.2	56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0
.			2003	35	0.0	3.7	92.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
.			2005	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
.			2006	7	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LB	2001	2489	2001	91	3.3	41.8	53.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
.			2002	236	1.4	36.0	60.1	1.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.4
.			2003	98	0.0	2.7	97.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2004	18	14.5	49.1	36.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2005	7	0.0	13.3	35.4	0.0	17.7	0.0	0.0	0.0	15.9	0.0	0.0	0.0	0.0	17.7
.			2006	23	0.0	56.8	36.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0
3LB	2002	2369	2002	201	0.0	32.6	66.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
.			2003	210	0.0	8.0	91.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2004	30	12.1	52.8	35.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2005	14	0.0	25.5	37.0	18.5	9.2	0.0	0.0	0.0	0.0	0.0	0.0	9.9	0.0	0.0
.			2006	29	0.0	23.1	76.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LB	2003	472	2003	1	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2005	3	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2006	7	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LB	2004	932	2005	30	4.4	24.0	67.7	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0
.			2006	35	11.5	41.2	40.6	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
3LB	2005	828	2005	11	0.0	37.5	37.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5
.			2006	33	6.1	19.7	74.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LB	2006	880	2006	36	5.6	38.9	55.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

cont'd.

Table 7 (Cont'd.)

Release area	Release year	Number tagged	Recapture year	Adjusted nos. recap'd	% of annual recaptures													
					3K	3LA	3LB	3LF	3LJ	3LQ	3NO	3Psa	3Psb	3Psc	3Psd	3PsOFF	4RS3Pn	unk
3LF	1999	194	1999	18	0.0	0.0	0.0	79.6	7.5	0.0	0.0	0.0	0.0	12.9	0.0	0.0	0.0	0.0
.			2000	9	15.2	0.0	15.2	44.5	0.0	0.0	0.0	0.0	0.0	25.2	0.0	0.0	0.0	0.0
.			2001	4	0.0	0.0	0.0	0.0	0.0	71.5	0.0	0.0	0.0	28.5	0.0	0.0	0.0	0.0
3LF	2000	263	2000	14	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2001	6	0.0	0.0	0.0	48.7	32.5	0.0	0.0	0.0	0.0	18.8	0.0	0.0	0.0	0.0
.			2002	6	0.0	0.0	40.8	40.8	0.0	0.0	0.0	0.0	0.0	18.4	0.0	0.0	0.0	0.0
.			2004	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
3LJ	1997	306	1997	11	0.0	0.0	12.0	0.0	79.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0
.			1998	13	10.4	0.0	0.0	28.7	20.1	0.0	0.0	0.0	0.0	21.2	0.0	9.9	0.0	9.7
.			1999	17	0.0	0.0	20.6	0.0	15.2	0.0	0.0	0.0	0.0	55.8	0.0	8.4	0.0	0.0
.			2000	14	9.8	0.0	0.0	9.8	18.1	0.0	0.0	0.0	0.0	33.6	10.4	9.3	0.0	9.1
.			2001	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
.			2002	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
3LJ	1999	21	1999	9	0.0	0.0	11.2	0.0	44.4	0.0	0.0	0.0	0.0	44.4	0.0	0.0	0.0	0.0
.			2000	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
.			2001	1	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.			2004	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
3LJ	2000	48	2000	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
.			2001	4	0.0	0.0	0.0	22.8	0.0	0.0	0.0	0.0	0.0	77.2	0.0	0.0	0.0	0.0
.			2004	1	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3LJ	2001	157	2001	19	0.0	5.2	0.0	5.2	82.4	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0
.			2002	12	0.0	0.0	0.0	0.0	78.6	0.0	0.0	0.0	0.0	10.1	0.0	0.0	0.0	11.2

cont'd.

Table 7 (Cont'd.)

Release area	Release year	Number tagged	Recapture year	Adjusted nos. recap'd	% of annual recaptures													
					3K	3LA	3LB	3LF	3LJ	3LQ	3NO	3Psa	3Psb	3Psc	3Psd	3PsOFF	4RS3Pn	unk
3LQ	1997	1319	1997	29	0.0	0.0	0.0	13.5	8.5	4.3	0.0	0.0	0.0	73.7	0.0	0.0	0.0	0.0
.			1998	85	0.0	4.3	4.5	4.3	6.0	15.4	0.0	0.0	4.4	55.3	0.0	2.7	0.0	3.1
.			1999	123	1.0	1.1	4.0	1.0	0.0	4.7	0.0	1.0	7.2	74.9	0.0	2.3	0.0	2.9
.			2000	50	0.0	0.0	0.0	0.0	2.6	2.6	0.0	0.0	7.1	87.7	0.0	0.0	0.0	0.0
.			2001	19	5.2	15.6	5.2	0.0	0.0	0.0	0.0	0.0	0.0	61.3	0.0	7.4	0.0	5.2
.			2002	8	0.0	0.0	0.0	0.0	0.0	15.7	0.0	0.0	0.0	84.3	0.0	0.0	0.0	0.0
.			2003	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
.			2004	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
.			2005	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
3LQ	1999	1013	1999	169	0.0	0.0	2.4	0.0	2.9	3.7	0.0	0.0	2.5	86.1	0.7	0.0	0.0	1.6
.			2000	108	0.0	0.0	2.4	0.0	3.6	7.3	0.0	0.0	1.1	85.7	0.0	0.0	0.0	0.0
.			2001	51	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	2.3	86.0	0.0	0.0	0.0	1.9
.			2002	18	0.0	0.0	0.0	0.0	7.3	7.3	0.0	0.0	0.0	77.6	0.0	7.8	0.0	0.0
.			2003	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
.			2004	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
3LQ	2000	316	2000	48	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0	5.0	76.3	0.0	5.9	0.0	4.7
.			2001	41	0.0	2.4	0.0	0.0	4.9	4.9	0.0	3.4	2.9	68.8	3.4	9.3	0.0	0.0
.			2002	17	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0	0.0	84.9	0.0	0.0	0.0	0.0
.			2003	5	0.0	0.0	26.0	0.0	0.0	0.0	0.0	0.0	0.0	46.2	0.0	27.8	0.0	0.0
.			2004	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
3LQ	2001	722	2001	148	0.7	0.0	2.7	2.7	1.3	40.4	0.0	0.0	0.8	50.0	0.0	0.0	0.0	1.3
.			2002	70	0.0	0.0	1.9	0.0	3.8	13.3	0.0	0.0	0.0	79.1	0.0	0.0	0.0	1.9
.			2003	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90.3	0.0	9.7	0.0	0.0
.			2004	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.7	0.0	0.0	0.0	17.3
.			2005	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
.			2006	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
3LQ	2002	148	2002	22	0.0	0.0	0.0	0.0	0.0	24.3	0.0	0.0	0.0	75.7	0.0	0.0	0.0	0.0
.			2003	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
.			2004	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
.			2005	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0

cont'd.

Table 7 (Cont'd.)

Release area	Release year	Number tagged	Recapture year	Adjusted nos. recap'd	% of annual recaptures													
					3K	3LA	3LB	3LF	3LJ	3LQ	3NO	3Psa	3Psb	3Psc	3Psd	3PsOFF	4RS3Pn	unk
3PSC	1998	5715	1998	497	0.0	0.0	0.9	2.1	4.5	1.2	0.0	0.2	1.0	89.2	0.0	0.0	0.0	0.8
			1999	1138	0.3	0.4	2.3	2.4	1.8	1.3	0.0	0.2	4.2	84.7	0.0	0.8	0.0	1.6
			2000	534	0.6	0.2	0.7	0.4	0.4	2.4	0.0	0.7	4.5	87.9	0.0	1.5	0.0	0.6
			2001	158	1.3	0.6	0.0	0.6	1.3	3.8	0.0	0.0	3.5	85.1	0.0	3.1	0.0	0.6
			2002	55	0.0	2.4	0.0	0.0	0.0	8.8	0.0	0.0	0.0	82.5	0.0	2.3	0.0	3.9
			2003	29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.3	79.7	0.0	0.0	0.0	4.1
			2004	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.5	0.0	0.0	0.0	15.5
			2005	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
			2006	10	0.0	0.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0	86.6	0.0	0.0	0.0	0.0
3PSC	1999	4574	1999	654	0.0	0.0	0.8	0.4	0.8	0.6	0.0	0.0	0.8	96.3	0.0	0.0	0.0	0.2
			2000	761	0.0	0.0	0.3	0.2	0.5	1.2	0.0	0.0	2.9	94.4	0.0	0.2	0.0	0.3
			2001	274	0.0	0.4	0.4	0.7	0.7	2.9	0.0	0.0	2.2	88.9	0.0	2.6	0.0	1.2
			2002	93	0.0	0.0	1.4	0.0	1.4	3.9	0.0	0.0	6.5	83.1	0.0	1.5	0.0	2.2
			2003	28	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	91.8	0.0	3.5	0.0	0.0
			2004	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	66.5	0.0	18.2	0.0	0.0
			2005	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
			2006	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
3PSC	2000	6191	2000	612	0.0	0.0	0.0	0.0	0.4	1.3	0.0	0.0	1.5	95.6	0.2	0.0	0.0	1.0
			2001	799	0.0	0.0	0.4	0.6	0.8	3.8	0.0	0.2	1.3	91.4	0.0	1.0	0.0	0.6
			2002	311	0.0	0.0	0.0	0.4	0.0	3.0	0.0	0.5	3.5	87.0	0.5	4.1	0.0	1.2
			2003	126	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.9	92.8	0.0	3.2	0.0	0.9
			2004	50	0.0	0.0	0.0	2.7	2.7	0.0	0.0	2.8	0.0	77.7	5.7	8.5	0.0	0.0
			2005	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86.7	0.0	9.3	0.0	4.0
			2006	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
3PSC	2001	4326	2001	646	0.2	0.2	0.2	1.2	0.6	4.6	0.0	0.0	1.1	89.2	0.0	0.9	0.0	1.8
			2002	496	0.3	0.3	0.3	0.5	0.5	0.8	0.0	0.6	1.0	93.2	0.0	1.4	0.0	1.2
			2003	208	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	92.6	0.0	4.6	0.0	1.1
			2004	71	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	96.3	0.0	2.0	0.0	0.0
			2005	46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	85.6	0.0	9.2	0.0	2.6
			2006	29	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0	87.1	0.0	5.1	0.0	0.0
3PSC	2002	4907	2002	566	0.0	0.0	0.0	0.2	0.0	1.2	0.0	0.2	0.0	98.1	0.0	0.0	0.0	0.2
			2003	660	0.0	0.0	0.0	0.2	0.0	0.4	0.0	0.0	1.9	96.1	0.0	1.0	0.0	0.4
			2004	342	0.4	0.0	0.4	0.0	0.0	0.4	0.0	0.4	0.3	96.7	0.0	0.4	0.0	0.9
			2005	131	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	95.3	0.0	2.9	0.0	0.8
			2006	73	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.1	0.0	8.0	0.0	3.8
3PSC	2003	5706	2003	603	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.4	98.9	0.0	0.2	0.0	0.0
			2004	670	0.0	0.0	0.1	0.2	0.3	0.2	0.0	0.3	0.7	97.8	0.0	0.3	0.0	0.0
			2005	341	0.0	0.0	0.3	0.0	0.7	0.0	0.0	1.0	0.7	94.3	0.0	2.4	0.0	0.7
			2006	184	0.0	0.0	2.4	0.7	0.0	0.7	0.0	0.0	0.0	89.7	0.5	1.3	1.0	3.6

cont'd.

Table 7 (Cont'd.)

Release area	Release year	Number tagged	Recapture year	Adjusted nos. recap'd	% of annual recaptures													
					3K	3LA	3LB	3LF	3LJ	3LQ	3NO	3Psa	3Psb	3Psc	3Psd	3PsOFF	4RS3Pn	unk
3PSH	1998	1842	1998	30	0.0	0.0	0.0	3.3	0.0	0.0	4.7	0.0	0.0	22.7	0.0	69.3	0.0	0.0
.			1999	29	0.0	0.0	0.0	4.5	4.2	0.0	0.0	0.0	0.0	33.6	0.0	50.9	3.4	3.4
.			2000	19	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	6.3	24.1	0.0	57.0	0.0	7.4
.			2001	8	0.0	0.0	12.1	0.0	0.0	0.0	0.0	0.0	0.0	40.5	0.0	32.3	0.0	15.2
.			2002	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	0.0	49.2	0.0	27.5
.			2003	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
.			2005	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9	57.1	0.0
3PSH	1999	1808	1999	50	2.0	0.0	2.7	0.0	7.8	2.5	4.9	0.0	0.0	40.4	0.0	30.9	0.0	8.9
.			2000	59	0.0	0.0	0.0	4.5	0.0	2.2	2.4	0.0	0.0	21.9	4.8	43.4	0.0	20.8
.			2001	25	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	4.9	29.0	0.0	52.3	0.0	9.8
.			2002	17	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	42.0	0.0	30.7	0.0	19.1
.			2003	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.1	0.0	36.7	0.0	33.1
.			2004	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	35.8	45.4
3PSH	2000	1044	2000	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.8	0.0	0.0	54.2	0.0	0.0
.			2001	16	0.0	0.0	0.0	0.0	0.0	6.2	17.6	0.0	0.0	7.5	0.0	51.0	0.0	17.6
.			2002	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	55.0	0.0	0.0
.			2003	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
.			2004	3	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0
.			2005	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
3PSH	2001	1145	2001	13	0.0	0.0	0.0	0.0	0.0	7.8	11.0	0.0	0.0	18.6	0.0	51.7	0.0	11.0
.			2002	17	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	19.8	0.0	49.6	0.0	24.8
.			2003	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.7	0.0	44.3	0.0	28.0
.			2004	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.9	0.0	47.1	0.0	0.0
.			2005	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.8	0.0	47.2
.			2006	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.4	0.0	0.0	0.0	63.6	0.0	0.0
3PSH	2002	1509	2002	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.8	0.0	66.1	0.0	12.1
.			2003	16	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	34.4	0.0	33.3	0.0	23.6
.			2004	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	8.3	0.0	58.5	0.0	23.4
.			2005	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.2	0.0	66.8	0.0	0.0
.			2006	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.4	0.0	34.6	0.0	0.0
3PSH	2003	621	2003	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.4	0.0	31.3	0.0	31.3
.			2004	9	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.0	44.4	0.0	30.0	0.0	10.6
.			2005	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	0.0	71.4	0.0	10.6
.			2006	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.2	0.0	28.8
3PSH	2004	1747	2004	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
.			2005	68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.8	0.0	67.2	0.0	5.0
.			2006	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.3	5.3	57.1	0.0	9.3
3PSH	2005	1490	2005	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
.			2006	63	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	3.2	35.6	0.0	43.7	0.0	13.3

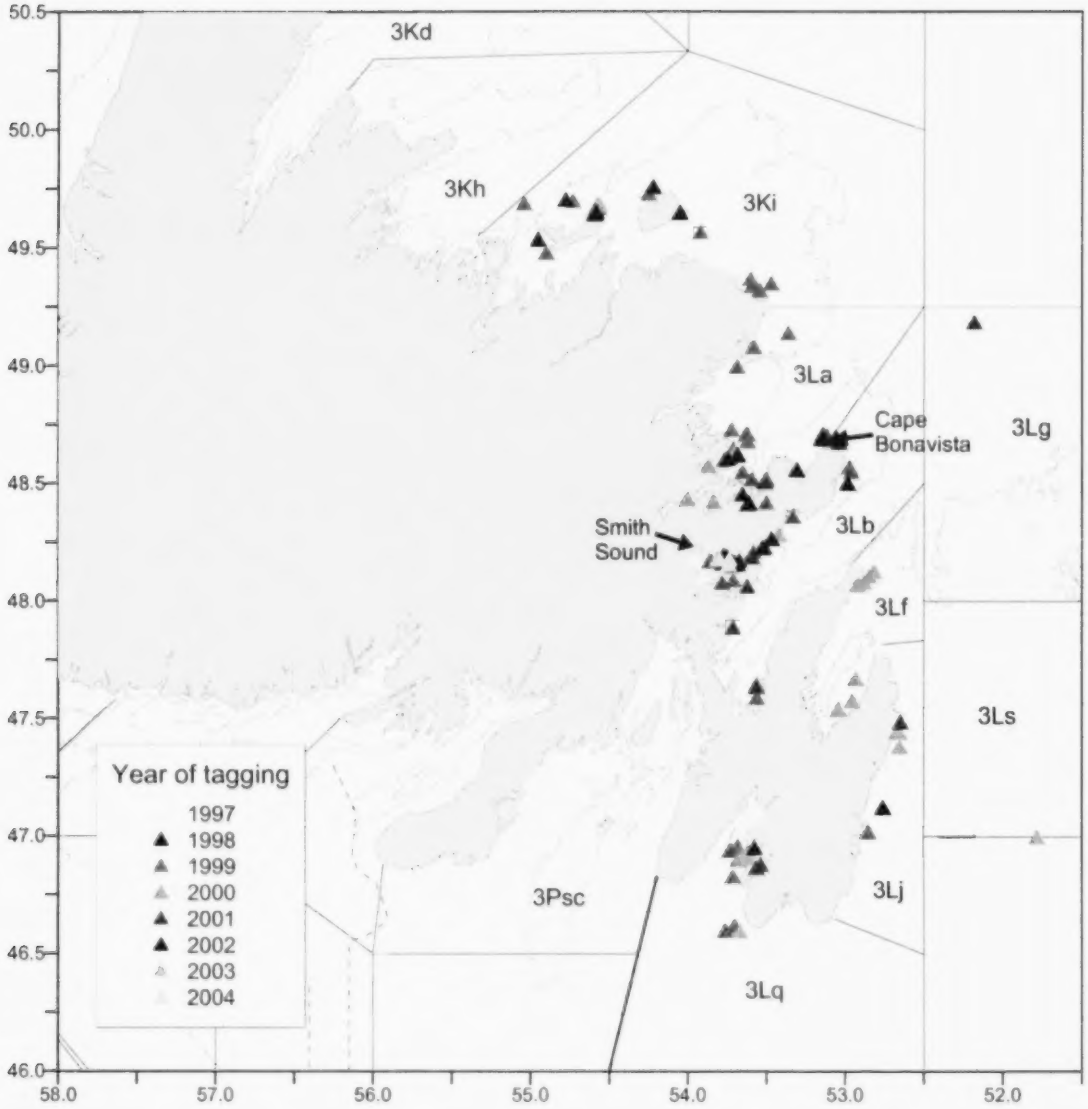


Figure 1. Locations where cod were tagged off eastern Newfoundland (NAFO Div. 3KL) during 1997-2004. Boundaries of statistical unit areas (solid line), the 200 m depth contour (grey line) and the French economic zone surrounding Saint Pierre and Miquelon (dashed line) are also shown.

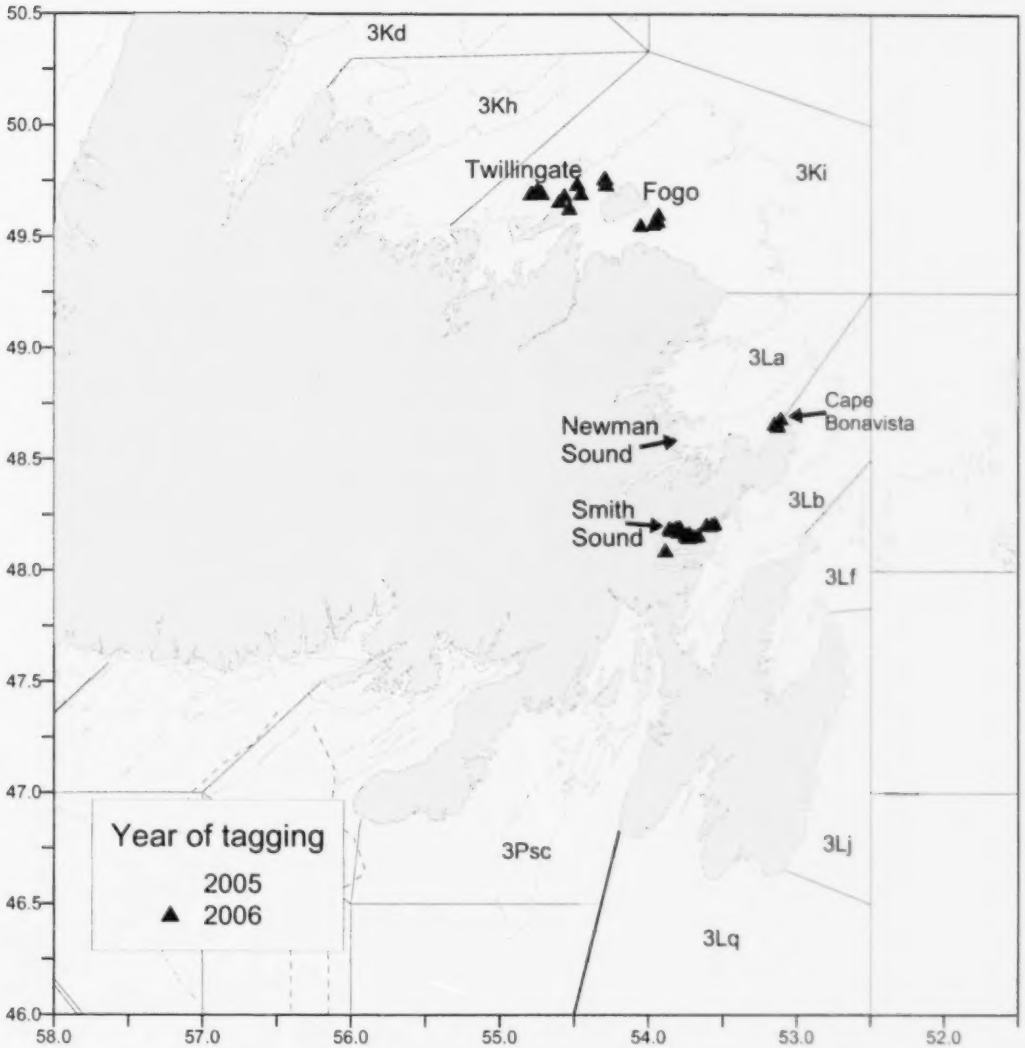


Figure 2. Locations where cod were tagged off eastern Newfoundland (NAFO Div. 3KL) during 2005 and 2006. Boundaries of statistical unit areas (solid line), the 200 m depth contour (grey line), and the French economic zone surrounding Saint Pierre and Miquelon (dashed line) are also shown.

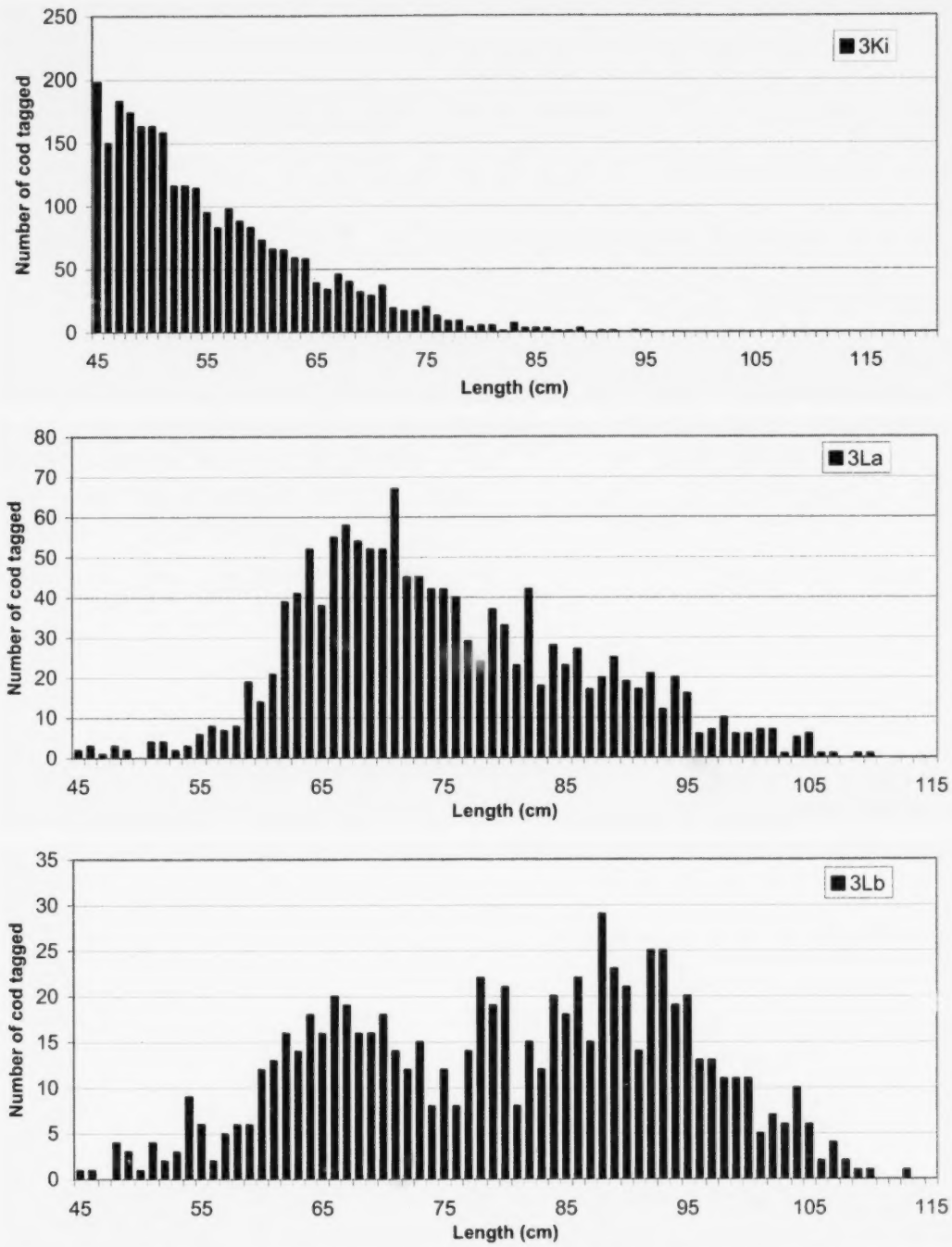


Figure 3. Length frequency of cod tagged and released in three inshore areas off northeastern Newfoundland during 2006.

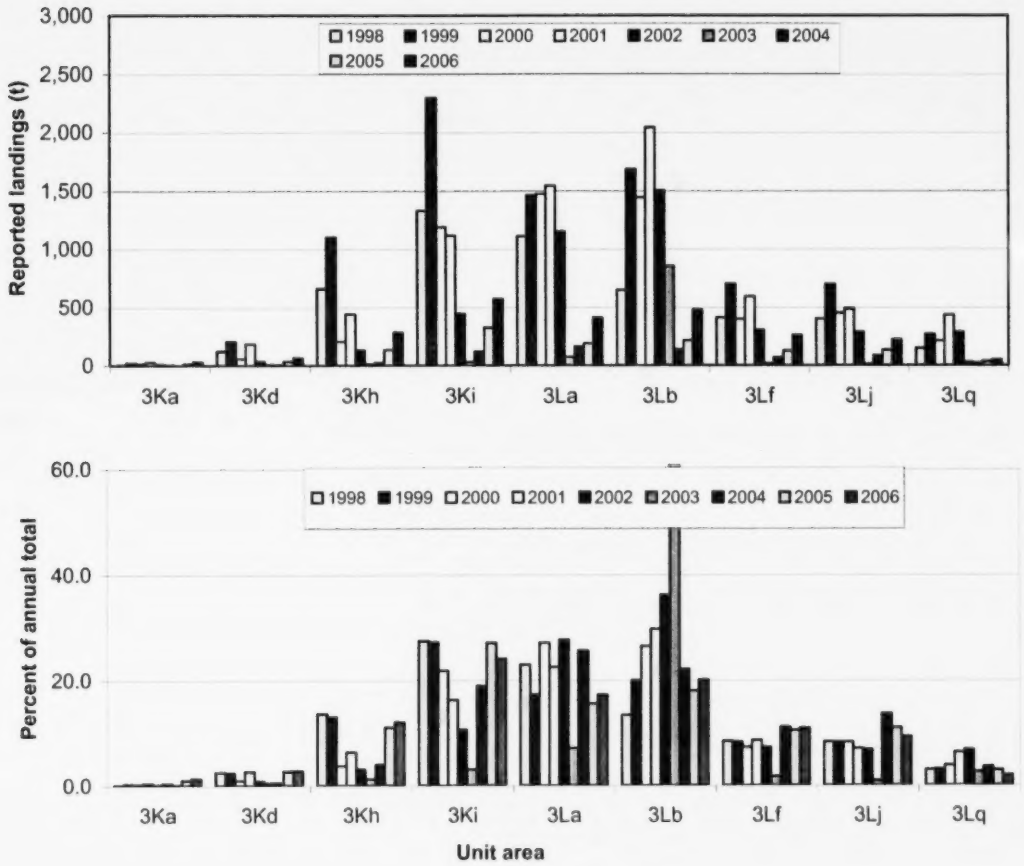
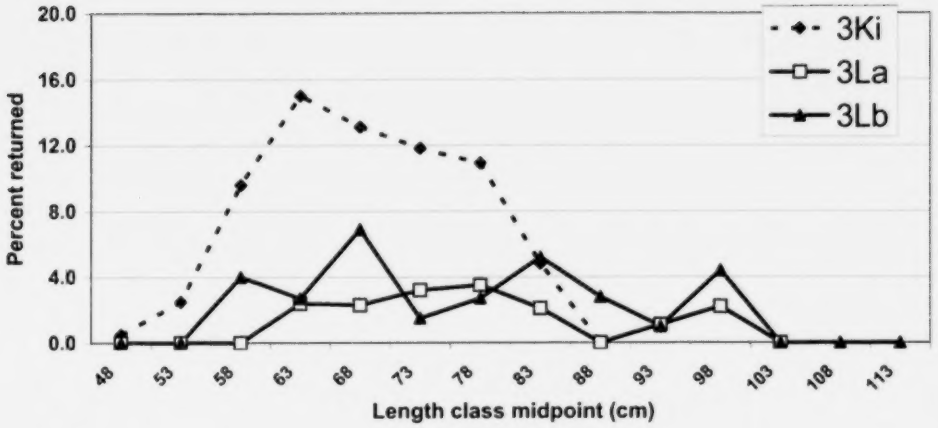


Figure 4. Distribution of cod landings (t) along the inshore (north to south) of NAFO Div. 3KL since 1998. Reported offshore landings have been low (<50 t) throughout this period.



Number of cod tagged per length group

Length	48	53	58	63	68	73	78	83	88	93	98	103	108	113
3Ki	868	667	447	321	191	119	55	21	11	3	1	0	0	0
3La	11	13	48	167	257	251	172	144	112	89	45	26	9	1
3Lb	9	19	25	73	87	67	75	76	107	104	68	39	15	2

Figure 5. Numbers of cod tagged and percentage recaptured by 5 cm length class for cod tagged and released in three inshore areas of 3KL in 2006 prior to the start of the fishery.

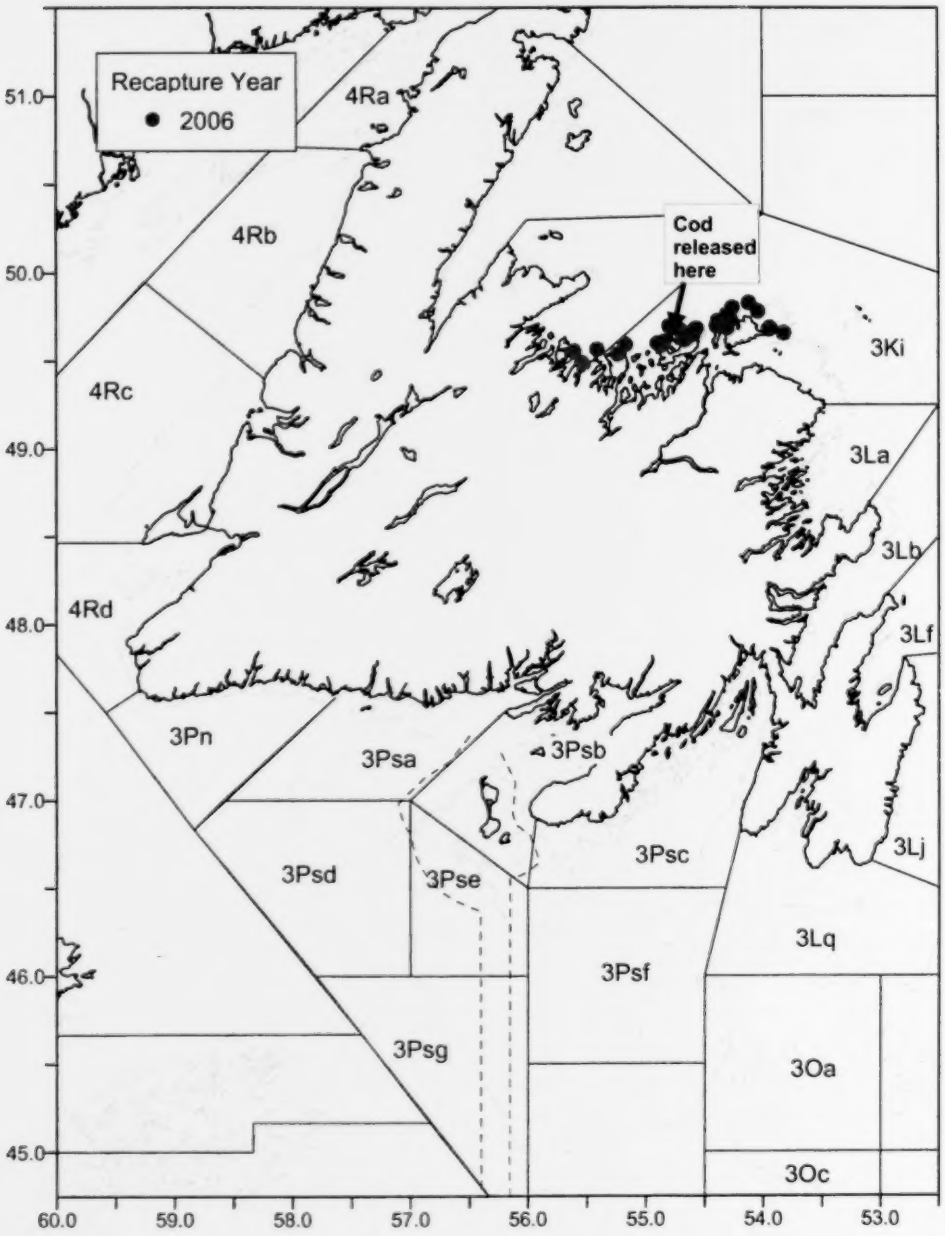


Figure 6. Release and reported recapture positions for cod tagged and released in 3Ki (Too Good Arm) during 15-23 June 2006. Boundaries of statistical unit areas (solid lines) and 200 m depth contour (grey lines) are also shown.

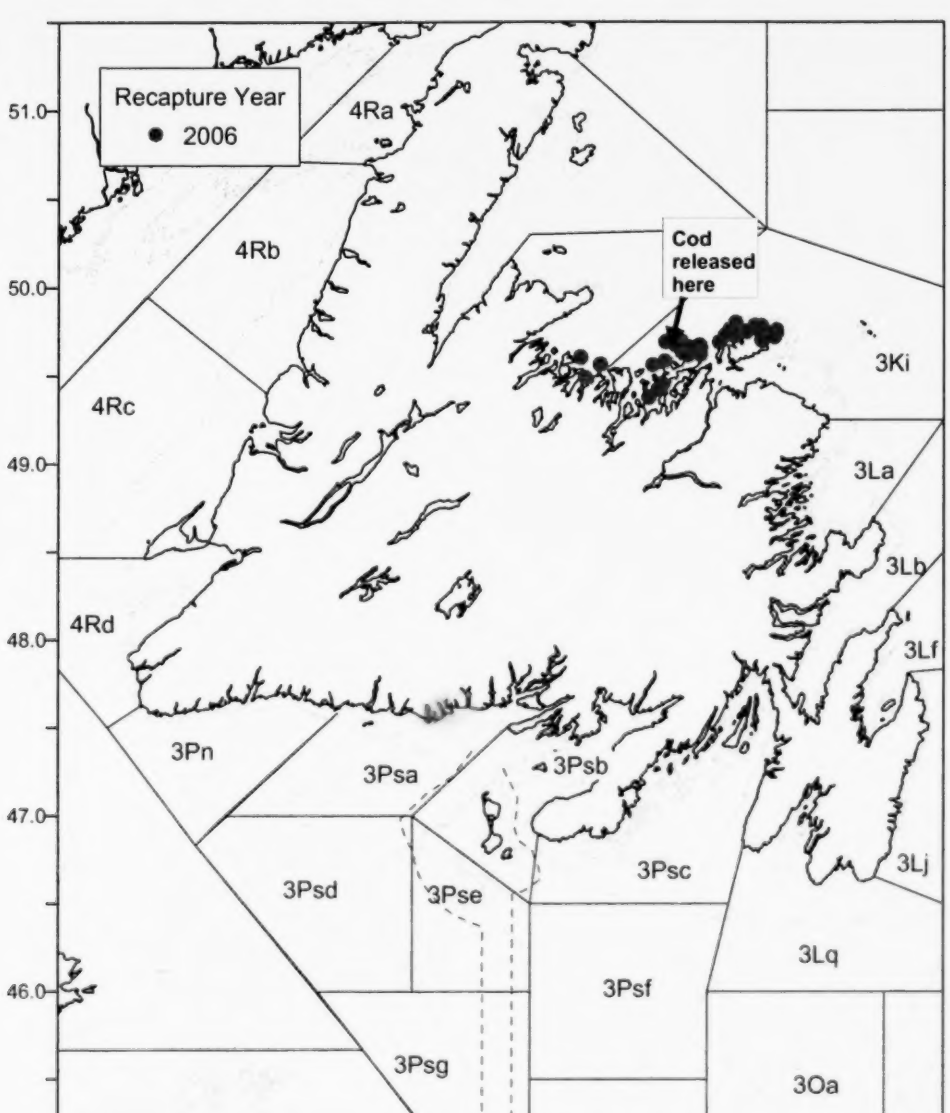


Figure 7. Release and reported recapture positions for cod tagged and released in 3Ki (Twillingate) during 27 June-8 July 2006. Boundaries of statistical unit areas (solid lines) and 200 m depth contour (grey lines) are also shown.

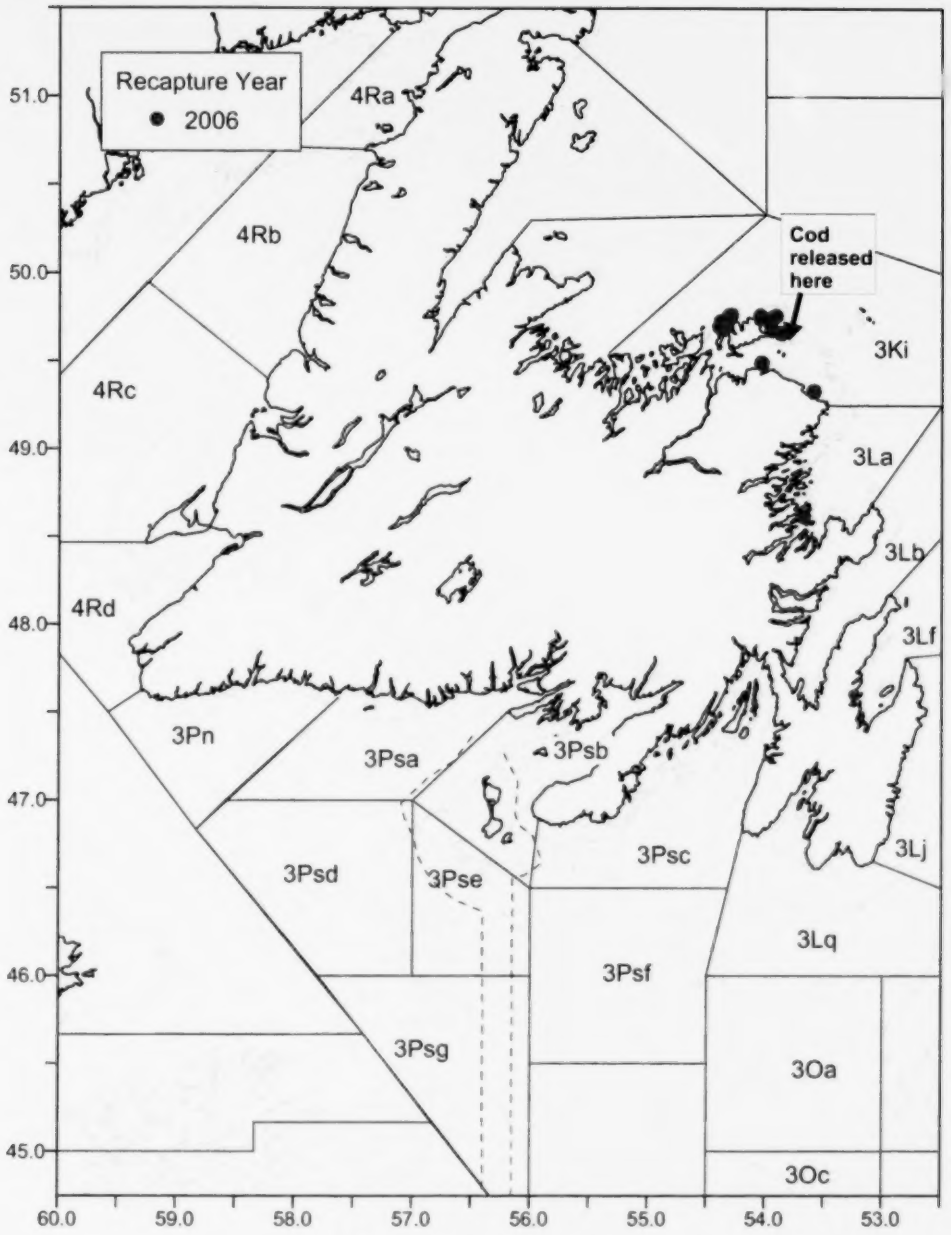


Figure 8. Release and reported recapture positions for cod tagged and released in 3Ki (Fogo) during 5-7July 2006. Boundaries of statistical unit areas (solid lines) and 200 m depth contour (grey lines) are also shown.

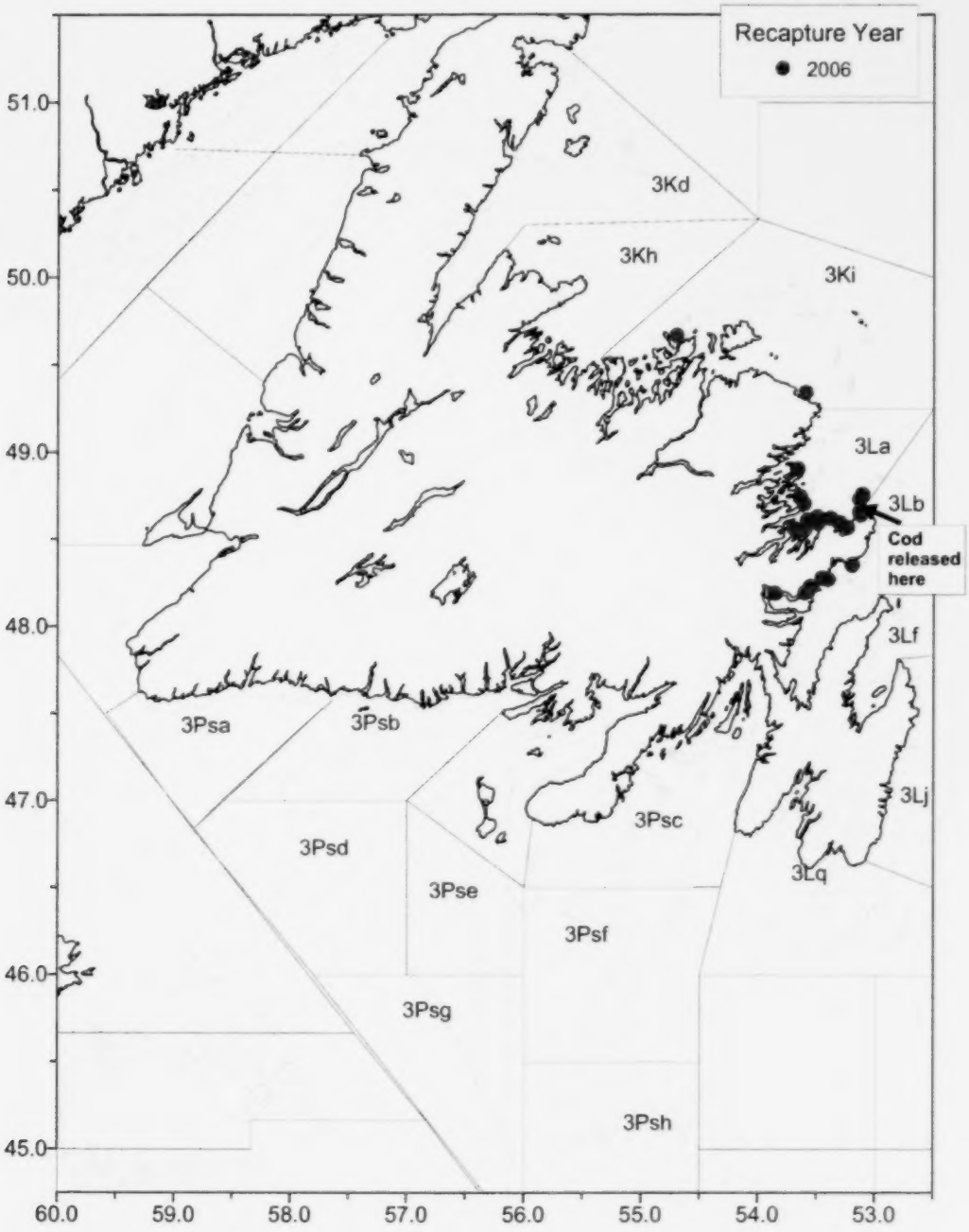


Figure 9. Release and reported recapture positions for cod tagged and released in 3La (Bonavista) during 4-10 June 2006. Boundaries of statistical unit areas (solid lines) and 200 m depth contour (grey lines) are also shown.

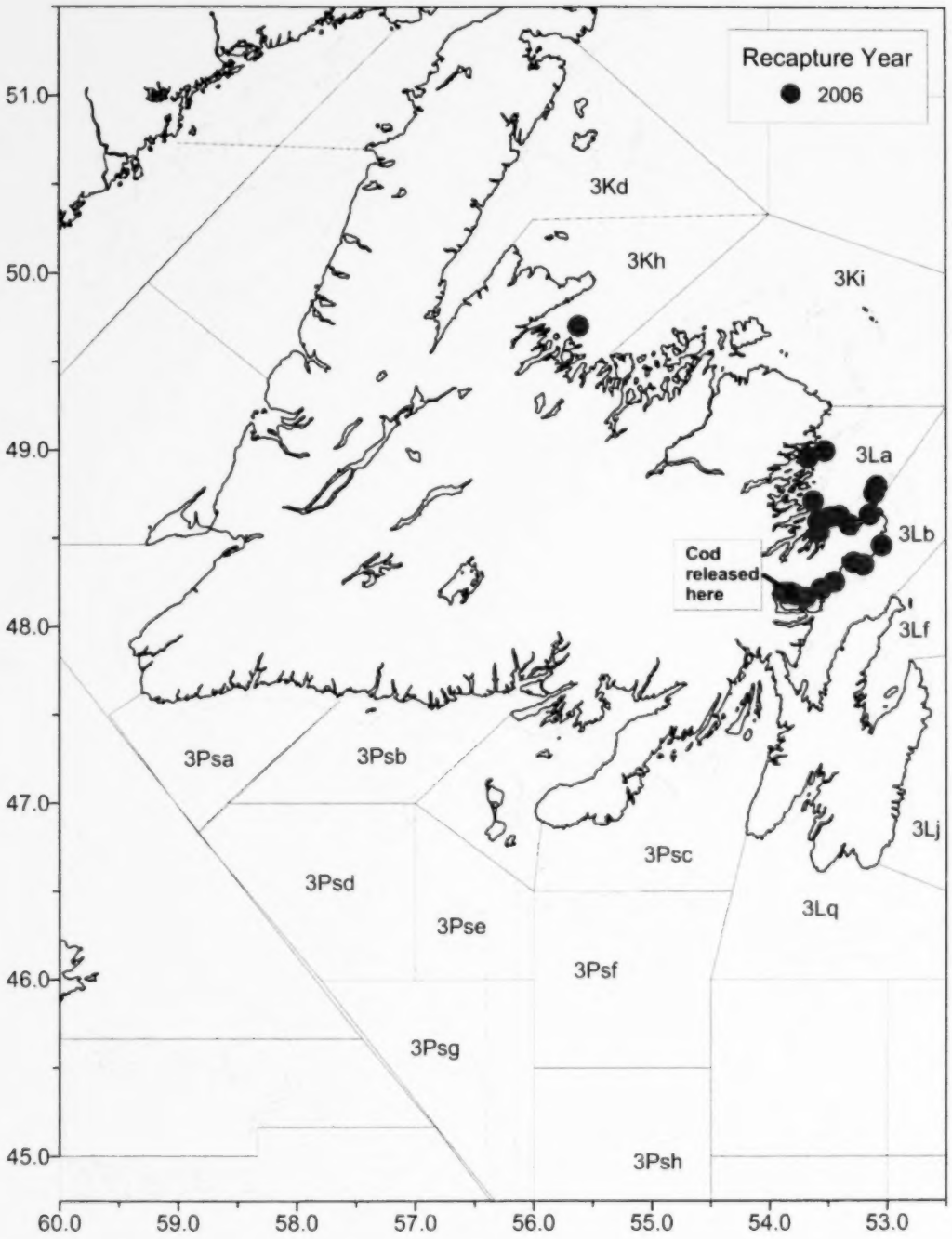


Figure 10. Release and reported recapture positions for cod tagged and released in 3Lb (Smith Sound) during 26 April-25 May 2006. Boundaries of statistical unit areas (solid lines), 200 m depth contour (grey lines), and French economic zone surrounding St. Pierre and Miquelon (dashed line) are also shown.

Figure 11. Stacked bar charts showing distribution of recaptures from cod tagged in 3Ki during 1998, 1999, 2000, and 2002. Recaptures from all years combined are grouped into bins of 0.2 degree longitude and 0.1 degree latitude. The red bars indicate the boundaries of the central inshore area where most tagged cod were recaptured.

Figure 12. Stacked bar chart showing distribution of recaptures from cod tagged in 3Ki during 2005 and 2006. Recaptures are grouped into bins of 0.2 degree longitude and 0.1 degree latitude.

Figure 13. Stacked bar chart showing distribution of recaptures from cod tagged in 3La (Bonavista Bay) during 1997, and 1999-2002. Recaptures are grouped into bins of 0.2 degree longitude and 0.1 degree latitude.

Figure 14. Stacked bar chart showing distribution of recaptures from cod tagged in 3La (Bonavista Bay) during 2006. Recaptures are grouped into bins of 0.2 degrees longitude and 0.1 degree latitude.

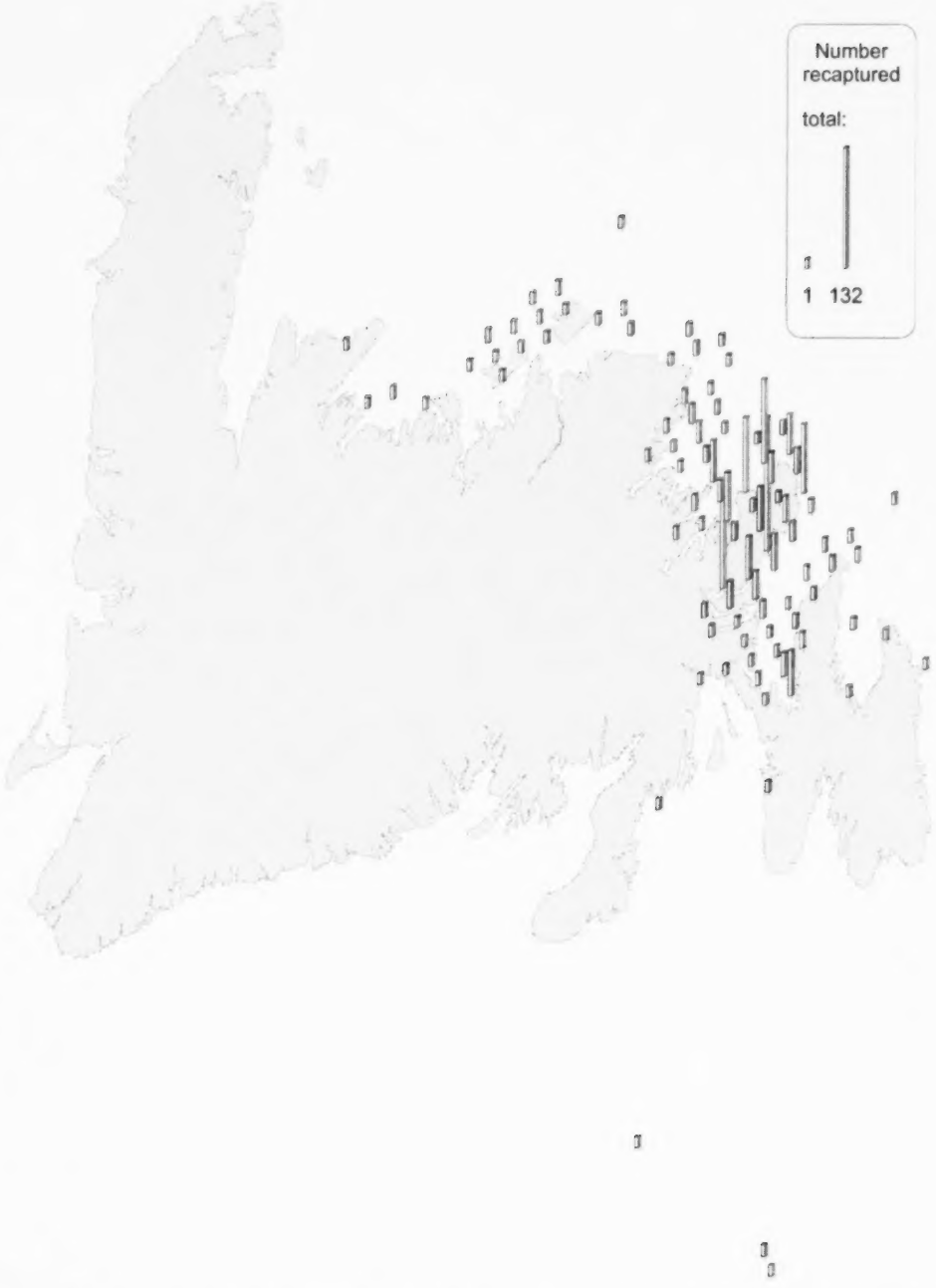


Fig. 15. Stacked bar chart showing distribution of recaptures from cod tagged in 3Lb (Trinity Bay) during 1997 and 1999-2005. Recaptures are grouped into bins of 0.2 degree longitude and 0.1 degree latitude.

Figure 16. Stacked bar chart showing distribution of recaptures from cod tagged in 3Lb (Trinity Bay) during 2006. Recaptures are grouped into bins of 0.2 degree longitude and 0.1 degree latitude.

Figure 17. Stacked bar chart showing distribution of recaptures from cod tagged in 3Psc (Placentia Bay) during 1997-2003. Recaptures are grouped into bins of 0.2 degree longitude and 0.1 degree latitude.

Figure 18. Stacked bar chart showing distribution of recaptures from cod tagged in 3Psh (Halibut Channel) during 1998-2005. Recaptures are grouped into bins of 0.2 degree longitude and 0.1 degree latitude.

AccessAmerica®

Event Ticket Protector℠

CERTIFICATE OF INSURANCE

For Customer Service Call:

1-866-456-3102

For Claim Information, Visit or Call:

www.EventTicketProtector.com

1-800-334-7525

Insurance benefits are underwritten by BCS Insurance Company. Plan administered by World Access Service Corp.

Access America is a Service mark and a division of World Access Service Corp.

Form No. 52.401 ET_C_R
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CERTIFICATE OF INSURANCE

This Certificate of Insurance describes the travel insurance benefit, underwritten by BCS Insurance Company and herein referred to as the Company. Please refer to the accompanying Letter of Confirmation. It provides You with specific information about the program You purchased. Please contact Access America immediately if You believe that the Letter of Confirmation is incorrect.

*Indicates insurance coverage provided under a Master Policy issued by BCS Insurance Company.

Massachusetts Residents Only: This Certificate is governed by the laws of Massachusetts.

RENEWAL CONDITIONS

This Certificate is issued for a single term as stated in the Letter of Confirmation and is non-renewable.

SATISFACTION GUARANTEE

Within 10 days of purchasing the program, Access America will process a full refund of premium to You, as long as You have not already departed on Your Trip or filed a claim. No refunds shall be paid to You after 10 days of purchasing the program.

PLEASE READ THIS CERTIFICATE CAREFULLY FOR FULL DETAILS.

PROGRAM FEATURES

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Part II. Termination Date
Part III. General Program Exclusions
Part IV. Description of Travel Insurance Benefit
Part V. General Provisions Related to Insurance Benefit
Part VI. Claim Filing Procedures
Part VII. Definitions

Signed for BCS Insurance Company, 2 MidAmerica Plaza, Suite 200, Oakbrook Terrace, IL 60181.

Part I. EFFECTIVE DATE

Insurance shall be effective the day after Your application is postmarked, Your telephone order is placed, or Your faxed order is received, and Your application is accepted. In no event will coverage be effective if all premiums due have not been received prior to the Scheduled Departure Date or prior to the Trip Cancellation date if You cancel Your Trip or it is canceled for any reason.

Part II. TERMINATION DATE

Coverage ends at midnight on the date of return selected, or upon return to Your city of residence or when the Trip is canceled, whichever is earliest. If return is delayed for any covered reason, coverage is extended until You are able to return to Your city of residence. The day You depart and the day You return are counted and included as separate days when determining duration of coverage.

Part III. GENERAL PROGRAM EXCLUSIONS

No coverage is provided for any loss arising directly or indirectly out of or as a result of the following:

1. Intentionally self-inflicted harm, suicide or attempted suicide, by You, a Traveling Companion or a Family Member;
2. Normal Pregnancy, fertility treatments, Childbirth or elective abortion, other than unforeseen complications of pregnancy, of You, a Traveling Companion or a Family Member;
3. Mental or nervous health disorders, including but not limited to: anxiety, depression, neurosis or psychosis; or physical complications related thereto, of You, a Traveling Companion or a Family Member;
4. Alcohol or substance abuse or use; or conditions or physical complications related thereto, of You, a Traveling Companion or a Family Member;
5. War (whether declared or undeclared), acts of war, military duty (unless as covered herein), civil disorder, or unrest;
6. Participation in professional or amateur sport events (including training);
7. All extreme, high risk sports including but not limited to: bodily contact sports; skydiving; hang gliding, bungee jumping, parachuting; mountain climbing or any other high altitude activities, caving, heli-skiing, extreme skiing, or any skiing outside marked trails;
8. Scuba diving (unless accompanied by a dive master and not deeper than 130 feet);
9. Operating or learning to operate any aircraft as pilot or crew;

10. Nuclear reaction, radiation or radioactive contamination;
11. Natural disasters (unless as specifically covered below);
12. Terrorism (unless as specifically covered below);
13. Epidemic;
14. Pollution or threat of pollutant release;
15. Any unlawful acts committed by You, Family Members, or Traveling Companions, whether they are insured or not; or
16. Any expected or foreseeable events.

These programs do not cover You:

1. If the purpose of the travel is to receive medical care, medication or treatment;
2. If the stated Trip departure and return dates do not reflect Your intended departure and return dates;
3. If the tickets do not indicate the travel dates;
4. If You give incorrect data or facts; or
5. If the loss is not submitted to Us within 90 days from the date of loss, except as otherwise prohibited by law.

Maximum Limit of Liability:

All limits are applied per Trip. The Company's maximum limit of liability resulting from same occurrence will be $5,000,000 under all of Our programs. If loss for all insureds for such an occurrence exceeds $5,000,000, We will pay each Insured that portion of the benefits stated which $5,000,000 bears to the total loss of all persons the Company insures under all travel and flight insurance in force, under all of Our programs. The Company will pay no more than $500,000 per occurrence, under Our programs, to or on account of any person insured under Our programs.

PRE-EXISTING CONDITIONS EXCLUSION

The program does not cover losses or expenses if they result from:

1. Any injury occurring to You, a Traveling Companion, or a Family Member prior to and including the effective date of Your insurance;
2. Any illness occurring to You, a Traveling Companion, or a Family Member during the 120 days prior to and including the effective date of Your insurance for which medical diagnosis or treatment by a Physician has been sought or advised or for which symptoms exist which would cause a prudent person to seek diagnosis, care or treatment.

For the purposes of determining any Pre-existing Conditions, the effective date of Your insurance will be Your Trip Cancellation Insurance effective date.

You have purchased a program where Pre-existing Conditions are waived, the Company and We cover these Pre-existing Conditions provided:

1. The insurance was purchased within fourteen calendar days of initial Trip payment;
2. The amount of Trip Cancellation coverage originally purchased equals the full cost of all non-refundable Trip arrangements;
3. On the date of purchase of insurance, You were medically able to travel and You had not filed a claim for Trip Cancellation due to a pre-existing illness within 120 days prior to the purchase of insurance; and
4. The total Trip cost is less than $10,000.

If You do not meet the above criteria, You may still be covered for Trip Cancellation caused by reasons other than those related to the Pre-existing Condition.

Part IV. DESCRIPTION OF TRAVEL INSURANCE BENEFIT (what is covered)

The following insurance benefit is designed to protect You against situations or losses that result from sudden and unexpected conditions or events. **The benefit does not cover conditions or events that, on the date of purchase, are either known to You or likely to occur. Please be aware that this stipulation may be applied to policies purchased with the Pre-existing Conditions Exclusion Waiver.** The Company and We reserve the right to reject applications.

TRIP CANCELLATION PROTECTION

Trip Cancellation coverage provides benefits for loss(es) You incur for Trips cancelled up to the time and date of departure.

For all of the covered reasons outlined below, You must notify the appropriate travel supplier(s) of Your cancellation within 72 hours of the occurrence, unless the condition prevents it, then as soon as reasonably possible. Otherwise the right to compensation will lapse.

A maximum benefit of up to the amount indicated in Your Letter of Confirmation is provided to cover certain expenses as listed below which result from the cancellation of Your Trip due to:

1. Any serious Injury or any unforeseen serious medical condition:
   a. Occurring to You or a Traveling Companion, which is so disabling as to cause a reasonable person to cancel their Trip;
   b. Occurring to a Family Member that is considered life threatening or requiring hospitalization; or
   c. Occurring to a Family Member requiring Your care.

An actual examination by a licensed Physician must take place within 72 hours of the cancellation. This Physician may not be a member of Your or Your Traveling Companion's immediate family or yourself, or an immediate family member of the person whose condition caused the cancellation.

2. Your death, the death of a Family Member or a Traveling Companion if the death occurs prior to Your Scheduled Departure Date.
3. You or a Traveling Companion being hijacked or quarantined.
4. You being required to serve on a jury, served with a court order or subpoena.
5. Your home being made uninhabitable by fire, flood, burglary, vandalism, or natural disasters.
6. You or a Traveling Companion being directly or indirectly involved in a traffic Accident while directly en route to a departure.
7. You or a Traveling Companion, who are on Active Military Duty in the United States Armed Forces:
   a. having Your personal leave revoked within 10 days prior to Your departure date (as long as such revocation is in writing by a superior officer and is not due to war-related situations, invocation of the War Powers Act, base or unit mobilization, unit reassignment for any reason, or disciplinary action); or
   b. are personally reassigned within 10 days prior to Your departure date, whether temporary or permanent.
8. You or a Traveling Companion being the victim of a Felonious Assault within 10 days prior to Your departure date. A Felonious Assault may not be inflicted by You, a Family Member, Traveling Companion or Traveling Companion's Family Member.
9. You or a Traveling Companion, after having been with the same employer for at least three continuous years, are terminated or laid off, through no fault of Your own, after Your effective date of coverage.
10. Your or Your Traveling Companion's automobile having a mechanical breakdown within 48 hours of the

event which results in the vehicle being unable to be driven.

11. You or a Traveling Companion are required to work during Your scheduled Trip. You must demonstrate proof of requirement to work, such as a notarized statement signed by an officer of Your employer.
12. You or Your spouse are relocated by Your or Your spouse's current employer to a location that is at least 100 miles from Your Primary Residence.
13. Common Carrier caused delay (including bad weather).
14. Your company being made uninhabitable by fire, flood, burglary, vandalism, or natural disasters.

In all cases You must notify the appropriate travel supplier(s) of Your cancellation within 72 hours, unless the condition prevents it, then as soon as reasonably possible. Otherwise the right to compensation will lapse.

Coverage is for forfeited, published, non-refundable Trip payments or deposits made by You if Your Trip is canceled;

Trip Cancellation benefits do not cover loss(es) due to:

1. Any General Program Exclusion or Pre-existing Condition;
2. You or a Traveling Companion: a) making changes to personal plans; b) having a business or contractual obligation; c) being unable to obtain necessary travel documents; or d) being detained or having property confiscated by any Customs authority; or
3. Prohibition or regulation by any government.

Please refer to Your Letter of Confirmation to determine the maximum amount of coverage purchased.

Part V. GENERAL PROVISIONS RELATED TO INSURANCE BENEFIT

1. All information in this Certificate with regard to the insurance benefit is subject to the terms and conditions of the Policy underwritten by BCS Insurance Company.
2. All suits, actions or legal proceedings arising from the programs, benefits, or services provided through the programs (collectively "Controversies") may be submitted to binding desk arbitration in accordance with the rules then applying to the American Arbitration Association. No demand for arbitration can be brought to recover benefits until 60 days have elapsed following submission of Your entire claim to World Access Service Corp. No action in any form can be brought after three years from the date Your claim was submitted to World Access Service Corp.
3. No agent or other person has authority to accept or make representations or information or alter, modify or waive any of the provisions of this Certificate.
4. Claims must be submitted to World Access Service Corp. within 90 days from date of loss, except as otherwise prohibited by law.
5. In the event that You are covered under another policy issued by the Company that provides the same or similar coverage, the Company will adjust Your claim by applying terms and conditions from the coverage that pays the most. Any premium paid for duplicate coverage will be refunded.
6. Benefits are payable to You or, if applicable, to Your estate unless a beneficiary is named on Your application.

Assignment: You may assign Your interest under the Certificate by giving Us written notice of such assignment. The assignment will not be effective until We receive the written notice. Neither the Company nor We assume any responsibility for the validity of any assignment.

Subrogation: The Company or We have the right to recover any payments We have made from anyone who may be responsible for the loss. You and/or any person to whom We make a payment must sign any papers and do whatever is necessary to transfer this right to Us. You and/or any person to whom We make a payment agree(s) to cooperate with Us and to do nothing after the loss that will adversely affect Our rights or those of the Company.

Physical Examinations and Autopsy: The Company has the right to physically examine You as often as reasonably needed while a claim is pending. The Company may also require an autopsy in the case of death, where it is not forbidden by law. The Company will bear all costs for these.

Part VI. CLAIM FILING PROCEDURES

Please contact Us at **1-800-334-7525,** or visit www.EventTicketProtector.com to obtain a claim form. All benefits will be paid in United States dollars. We will need certain information from You in the event You need to file a claim. This documentation will include, but is not limited to, the following:

1. **General Documentation**
   a. Receipts and itemized bills for all expenses.
   b. Original of any Refunds or expense allowances received from Your tour operator, travel agency, or other entity.
2. **Trip Cancellation Claims**
   a. Any appropriate documentation that officially explains the cause of Your trip cancellation. Any explanation of diagnosis along with Your original itemized bills, receipts, and proof of other insurance payments.
   b. Original unused tickets, copies of invoices, proof of payments, and other documents that substantiate the cost or occurrence of the trip cancellation.
   c. Documentation of Refunds received from the travel supplier(s).
   d. Copy of the supplier's literature that describes penalties.
   e. A letter from the tour operator or an itemized bill from the travel agent stating the non-refundable amounts of the Trip costs.

Part VII. DEFINITIONS

Accident means an unexpected, unintended, unforeseeable event causing Injury.

Active Military Duty means serving in the United States Armed Forces on a full-time basis, not including the United States Armed Forces Reserves.

Actual Cash Value means the amount an item is determined to be worth based on its market value, age and condition at the time of loss.

Common Carrier means an entity licensed to carry passengers for hire on land, water or air, excluding vehicle rental companies.

Coverage Period means the time during which benefits are payable hereunder, beginning on the effective date and ending on the termination date.

Covered Service means a service or supply specified herein for which benefits will be provided.

Family Member means Your spouse; parent; child(ren), including children who are, or are in the process of becoming, adopted; sibling; grandparent or grandchild(ren); step-parent; step-child; or step-sibling; in-laws (parent, son, daughter, brother or sister); aunt; uncle; niece; nephew; legal guardian; ward; or business partner; whether or not they travel with You.

Felonious Assault is an act of violence against You or a Traveling Companion requiring medical treatment in a Hospital.

Hospital means a provider that is a short-term, acute, general Hospital that:

1. is a duly licensed institution;
2. in return for compensation from its patients, is primarily engaged in providing Inpatient diagnostic

and therapeutic services for the diagnosis, treatment, and care of injured and sick persons by or under supervision of Physicians;
3. has organized departments of medicine and major surgery;
4. provides 24-hour nursing service by or under the supervision of registered graduate nurses; and
5. is not other than incidentally: a) a skilled nursing facility, nursing home, custodial care home, health resort, spa or sanatorium, place for rest, place for the aged, place for the provision of rehabilitation care; b) a place for the treatment of mental illness; c) a place for the treatment of alcoholism or drug abuse; d) a place for the provision of hospice care; or e) a place for the treatment of pulmonary tuberculosis.

Illness means a sickness, infirmity or disease that causes a loss that begins during a Coverage Period and is not a Pre-existing Condition.

Injury means bodily Injury caused by an Accident, directly and independently of all other causes and sustained on or after the effective date of this coverage and before the termination date. Benefits for Injury will not be paid for any loss caused by sickness or other bodily diseases or infirmity.

Normal Pregnancy or **Childbirth** means a pregnancy or Childbirth that is free of complications or problems.

Physician means a person who is licensed and legally entitled to practice medicine in the applicable field for which services are delivered.

Pre-existing Conditions means:

1. any injury occurring to You, Your Companion, or Your Family Member prior to and including the effective date of Your insurance; and
2. any illness occurring to You, Your Companion, or Your Family Member during the 120 days prior to and including the effective date of Your insurance for which: a) medical examination or treatment by a Physician has been sought or advised or for which symptoms exist which would cause a prudent person to seek diagnosis, care or treatment; or b) require taking prescribed drugs or medicine unless the illness remains controlled without any change in the required prescription.

For the purposes of determining any Pre-existing Conditions, the effective date of Your insurance will be Your Trip Cancellation Insurance effective date.

Primary Residence means a person's fixed, permanent and principal home for legal and tax purposes.

Refund means:

1. Money returned to You by the travel agent, tour operator, airline, cruise line or other travel supplier;
2. Any credit or voucher for future travel provided to You by the travel agent, tour operator, airline, cruise line or other travel supplier; or
3. Any credits, recoveries or reimbursements from Your employer, another insurance company, a credit card issuer or any other institution.

Scheduled Departure Date means the date You have selected to begin travel and for which paid travel arrangements have been made.

Terrorism means the unsanctioned and illegal use of force that caused destruction of property, Injury, or death by an individual or group for the express or implied purpose of achieving a political, ethnic, or religious goal or result. Terrorism does not include general civil protest, unrest, rioting, or an act of war.

Traveling Companion is a person traveling with You and who shares the same accommodations as You.

Trip means:

1. a period of round-trip travel to a destination that is at least one mile from Your main place of residence; and
2. is not to obtain health care or treatment of any kind.

We, Us or **Our** refers to Access America and World Access Service Corp.

You or **Your** refers to all persons listed on the Letter of Confirmation under the program purchased.

ET_C_R

California Residents: Please note that we are doing business in California as WASC Insurance Agency and our California License # is 0B01400.

Notice to Florida Residents: The benefits of the Policy providing your coverage are governed primarily by the law of a state other than Florida.